STIC Search Report
EIC 1700

STIC Database Tracking Number: 135567

TO: Helen Pezzuto **Location: REM 10A29** **Art Unit : 1713** **October 21, 2004** **Case Serial Number: 10/773257**	**From: Kathleen Fuller** **Location: EIC 1700** **REMSEN 4B28** **Phone: 571/272-2505** **Kathleen.Fuller@uspto.gov**

Search Notes

STIC Search Results Feedback Form

EIC 1700

Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 1713*
- *Relevant prior art* ***found****, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
  (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art* ***not found:***
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28

* PLEASE GIVE REQUEST TO Ms. K. FULLER. THANKS!

Access DB# 135569

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: HELEN PETTUTO Examiner #: 70058 Date: 10/18/04
Art Unit: 1713 Phone Number ~~30~~ 2-1108 Serial Number: 10/773,257
Mail Box and Bldg/Room Location: REM-1B29 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

SCIENTIFIC REFERENCE BR
Sci & Tech Info Ctr
OCT 21
Pat. & T.M. Office

Title of Invention: SEE ATTACHED

Inventors (please provide full names):

Earliest Priority Filing Date: 7/16/01

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Claims 7-10 pending (parent 6,706,771)
A method of making a "membrane" by forming a solution of a polymer, a silver salt and a phthalate compound using alcohol or THF as solvent
* See pages attached showing preferred embodiments of phthalate (dimethyl-, dibutyl-, dioctyl-, diphenyl phthalate), polymer (PVP, PMMA) and silver salt
* Claim 7 is broad i.e. search solution of any combination of a polymer, phthalate and silver salt on a substrate is sufficient.
THANKS!

****

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: K. Fuller	NA Sequence (#)	STN ✓
Searcher Phone #:	AA Sequence (#)	Dialog
Searcher Location:	Structure (#)	Questel/Orbit
Date Searcher Picked Up:	Bibliographic ✓	Dr.Link
Date Completed: 10/21/04	Litigation	Lexis/Nexis
Searcher Prep & Review Time: 30	Fulltext	Sequence Systems
Clerical Prep Time:	Patent Family	WWW/Internet
Online Time: 45	Other	Other (specify)

PTO-1590 (8-01)

=> FILE REG
FILE 'REGISTRY' ENTERED AT 15:18:24 ON 21 OCT 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 20 OCT 2004 HIGHEST RN 766487-31-4
DICTIONARY FILE UPDATES: 20 OCT 2004 HIGHEST RN 766487-31-4

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> FILE HCAPLUS
FILE 'HCAPLUS' ENTERED AT 15:18:28 ON 21 OCT 2004
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FILE COVERS 1907 - 21 Oct 2004 VOL 141 ISS 17
FILE LAST UPDATED: 20 Oct 2004 (20041020/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> D QUE L37
L2 27 SEA FILE=REGISTRY ABB=ON (106-97-8/BI OR 106-98-9/BI OR
109-66-0/BI OR 109-67-1/BI OR 109-99-9/BI OR 115-07-1/BI OR
117-84-0/BI OR 131-11-3/BI OR 14104-20-2/BI OR 25038-87-3/BI
OR 25805-17-8/BI OR 26042-63-7/BI OR 26042-64-8/BI OR 2923-28-6
/BI OR 69488-61-5/BI OR 74-84-0/BI OR 74-85-1/BI OR 74-98-6/BI
OR 7783-93-9/BI OR 84-62-8/BI OR 84-74-2/BI OR 9003-01-4/BI OR
9003-20-7/BI OR 9003-39-8/BI OR 9004-35-7/BI OR 9004-36-8/BI
OR 9011-14-7/BI)
L4 7 SEA FILE=REGISTRY ABB=ON L2 AND PMS/CI
L5 4 SEA FILE=REGISTRY ABB=ON L2 AND PHTHALAT?

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

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L6            5 SEA FILE=REGISTRY ABB=ON  L2 AND SILVER
L7            1 SEA FILE=REGISTRY ABB=ON  THF/CN
L8       162933 SEA FILE=HCAPLUS ABB=ON  L5 OR ?PHTHALAT?
L9       115257 SEA FILE=HCAPLUS ABB=ON  L4
L10        3424 SEA FILE=HCAPLUS ABB=ON  L6
L11           7 SEA FILE=HCAPLUS ABB=ON  L8 AND L9 AND L10
L12        3084 SEA FILE=HCAPLUS ABB=ON  L8 AND MEMBRANE?
L13         175 SEA FILE=HCAPLUS ABB=ON  L12 AND (AG OR SILVER OR L10)
L14          82 SEA FILE=HCAPLUS ABB=ON  L13 AND ?POLYMER?
L15          38 SEA FILE=HCAPLUS ABB=ON  L14 AND (SOLVENT# OR ALC OR ALCOHOL?
                 OR THF OR L7)
L16          24 SEA FILE=HCAPLUS ABB=ON  L14 AND (SUBSTRAT? OR SUPPORT?)
L17          56 SEA FILE=HCAPLUS ABB=ON  L11 OR L15 OR L16
L18          34 SEA FILE=HCAPLUS ABB=ON  L13 AND (POLYMER? OR PLASTIC?)/SC,SX
L19           9 SEA FILE=HCAPLUS ABB=ON  L18 AND (SUBSTRAT? OR SUPPORT?)
L20          10 SEA FILE=HCAPLUS ABB=ON  L18 AND (SOLVENT# OR ALC OR ALCOHOL?
                 OR THF OR L7)
L21          60 SEA FILE=HCAPLUS ABB=ON  L17 OR L19 OR L20
L22           4 SEA FILE=REGISTRY ABB=ON  METHANOL/CN OR ETHANOL/CN OR
                 N-PROPANOL/CN OR ISOPROPANOL/CN
L23           4 SEA FILE=REGISTRY ABB=ON  N-BUTANOL/CN OR ISOBUTANOL/CN OR
                 TERT-BUTANOL/CN OR SEC-BUTANOL/CN
L24           8 SEA FILE=REGISTRY ABB=ON  L22 OR L23
L25           7 SEA FILE=HCAPLUS ABB=ON  L14 AND (L24 OR (METHYL OR ETHYL OR
                 PROPYL OR BUTYL)(W)ALCOHOL? OR CH3OH OR ETOH OR I(W)PROH OR
                 PROOH OR METHANOL OR ETHANOL OR PROPANOL OR BUTANOL)
L26           0 SEA FILE=HCAPLUS ABB=ON  L14 AND PROH
L27           7 SEA FILE=HCAPLUS ABB=ON  L25 OR L26
L28          61 SEA FILE=HCAPLUS ABB=ON  L21 OR L27
L29           5 SEA FILE=HCAPLUS ABB=ON  L28 AND POF/RL
L30          21 SEA FILE=HCAPLUS ABB=ON  L28 AND (POLYMER? OR PLASTIC?)/SC,SX
L31          21 SEA FILE=HCAPLUS ABB=ON  L29 OR L30
L32          40 SEA FILE=HCAPLUS ABB=ON  L28 NOT L31
L33       80584 SEA FILE=HCAPLUS ABB=ON  MEMBRANE?(4A)(PRODUC? OR METHOD? OR
                 PREPAR? OR MANUF? OR PREP/RL OR PROCESS?)
L34           6 SEA FILE=HCAPLUS ABB=ON  L32 AND L33
L35          25 SEA FILE=HCAPLUS ABB=ON  L32 AND MEMBRANE?/IT
L36          46 SEA FILE=HCAPLUS ABB=ON  L31 OR L34 OR L35
L37          47 SEA FILE=HCAPLUS ABB=ON  L36 OR L11


=> D L37 BIB ABS IND HITSTR 1-47

L37  ANSWER 1 OF 47  HCAPLUS  COPYRIGHT 2004 ACS on STN
AN   2004:780583  HCAPLUS
TI   Purification of fluids with nanomaterials containing defective carbon
     nanotubes
IN   Cooper, Christopher H.; Cummings, Alan G.; Starostin, Mikhail Y.;
     Honsinger, Charles P.
PA   Seldon Technologies, LLC, USA
SO   PCT Int. Appl., 106 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
PI   WO 2004080578        A1    20040923    WO 2004-US6811         20040308
        W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
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CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2003-452530P P 20030307
US 2003-468109P P 20030506
US 2003-499375P P 20030903

AB A nanostructured material containing defective carbon nanotubes chosen from impregnated, functionalized, doped, charged, coated, and irradiated nanotubes is used for the purification of fluids by adsorption, absorption and/or size exclusion. The defective carbon nanotubes contain a defect which is a lattice distortion in at least one carbon ring. The nanostructured material contains carbon nanotubes in a liquid, solid, or gaseous medium. The solid medium can be metallic, ceramic, or **polymeric** fibers, **substrates**, and particles, together forming a nanomembrane. The **polymeric** material can be nylon, polyurethane, acrylic, methacrylic, polycarbonate, epoxy, silicone rubbers, natural rubbers, synthetic rubbers, vulcanized rubbers, polystyrene, polyethylene **terephthalate**, polybutylene **terephthalate**, poly (p-phenylene)terephthalamide, and polyester ester ketene, polyethylene **terephthalate**, viton fluoroelastomer, polytetrafluoroethylene, polyvinyl chloride, polyester (polyethylene **terephthalate**), polypropylene, and polychloroprene. The ceramic material can be boron carbide, boron nitride, boron oxide, boron phosphate, spinel, garnet, lanthanum fluoride, calcium fluoride, silicon carbide, carbon and its allotropes, silica, glass, quartz, alumina, aluminum nitride, zirconia, zirconium carbide, zirconium boride, zirconium nitrite, hafnium boride, thorium oxide, yttria, magnesia, phosphorus oxide, cordierite, mullite, silicon nitride, ferrite, sapphire, steatite, titanium carbide, titanium nitride, or titanium boride. The metallic material can be Al, B, Cu, Co, Au, Pt, Si, steel, Ti, Rh, In, Fe, Pd, Ge, Sn, Pb, W, Nb, Mo, Ni, **Ag**, Zr, Y, and their alloys. The liquid medium can be water, oil, organic or inorg. **solvents**, liquid N2 and CO2. Gaseous medium can be air, argon, nitrogen, helium, ammonia, and CO2. The carbon nanotubes can be functionalized with organic compds., such as carboxyls, amines, polyamides, polyamphiphiles, diazonium salts, pyrenyls, or silanes, or with inorg. compds., especially fluorine compds. of boron, titanium, niobium, or tungsten. The nanostructured material can be used for the purification of fluids, such as water, petroleum and its byproducts, biol. fluids, foodstuffs, beverages, and medicine. Contaminants being removed can be pathogens, microbiol. organisms, DNA, RNA, natural organic mols., molds, fungi, natural and synthetic toxins, heavy metals, endotoxins, proteins, or enzymes.

IC ICM B01D071-02
ICS C02F001-44; B01D069-14

CC 47-2 (Apparatus and Plant Equipment)
Section cross-reference(s): 63, 61, 51, 10, 17, **38**

ST fluid purifn **membrane** filter nanomaterial carbon nanotube composite; water purifn disinfection pathogen carbon nanotube **membrane** filter; fuel purifn bacteria removal **membrane** filtration carbon nanotube composite

IT Jet aircraft fuel
(biol. contaminated, purification; purification of fluids with nanomaterials

containing defective carbon nanotubes)
IT Nanotubes
(carbon; purification of fluids with nanomaterials containing defective carbon
nanotubes)
IT Toxins
RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(endotoxins; purification of fluids with nanomaterials containing defective carbon nanotubes)
IT Absorption
Adsorption
Bacillus (bacterium genus)
Ceramics
Drinking waters
Enterobacteria phage MS2
Escherichia coli
Fungi
Membrane filters
Micrococcus
Mold (fungus)
Pathogen
Petroleum products
(purification of fluids with nanomaterials containing defective carbon nanotubes)
IT Metals
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(purification of fluids with nanomaterials containing defective carbon nanotubes)
IT **Polymers**
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(purification of fluids with nanomaterials containing defective carbon nanotubes)
IT DNA
RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(purification of fluids with nanomaterials containing defective carbon nanotubes)
IT Enzymes
RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(purification of fluids with nanomaterials containing defective carbon nanotubes)
IT Heavy metals
RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(purification of fluids with nanomaterials containing defective carbon nanotubes)
IT Proteins
RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(purification of fluids with nanomaterials containing defective carbon nanotubes)
IT RNA
RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(purification of fluids with nanomaterials containing defective carbon

nanotubes)
IT Synthetic fibers
RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses)
(silica, nanofibers; purification of fluids with nanomaterials containing defective carbon nanotubes)
IT Water purification
(sterilization and disinfection; purification of fluids with nanomaterials containing defective carbon nanotubes)
IT 7440-44-0, Carbon
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(nanotubes; purification of fluids with nanomaterials containing defective carbon nanotubes)
IT 9003-07-0, Polypropylene
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(nonwoven fabric, carrier; purification of fluids with nanomaterials containing
defective carbon nanotubes)
IT 762261-71-2
RL: DEV (Device component use); USES (Uses)
(purification of fluids with nanomaterials containing defective carbon nanotubes)
IT 7440-38-2, Arsenic
RL: PEP (Physical, engineering or chemical process); POL (Pollutant); PYP (Physical process); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(purification of fluids with nanomaterials containing defective carbon nanotubes)
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 2 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:458819 HCAPLUS
DN 141:165372
TI Electrochemical transport properties of a cone-shaped nanopore: revisited
AU Woermann, D.
CS Institute of Physical Chemistry, University of Koeln, Cologne, 50939, Germany
SO Physical Chemistry Chemical Physics (2004), 6(12), 3130-3132
CODEN: PPCPFQ; ISSN: 1463-9076
PB Royal Society of Chemistry
DT Journal
LA English
AB There are reports in the literature that a single cone-shaped nanopore generated in a **polymer** foil separating two equally concentrated dilute aqueous KCl solns. can reach high and low stationary elec. conductivity states resp. depending on the sign of the applied elec. potential. From published data it was argued (D. Woermann, Phys. Chemical Phys., 2003, 5, 1853) that this phenomenon can be understood in terms of a well established model describing the electrochem. transport properties of polyelectrolyte **membranes** (model of the **membrane** with narrow pores). In the present contribution exptl. evidence is presented which gives strong **support** to these arguments using a model system. Based on the model of the **membrane** with narrow pores a composite **membrane** is constructed mimicking the structure and electrochem. function of an ensemble of conical nanopores. The characteristic electrochem. transport property of the composite **membrane** is that of a cone-shaped nanopore.

CC 76-2 (Electric Phenomena)
Section cross-reference(s): **36**, 66, 72
ST cond electrolytic **membrane** composite nanopore
IT **Membranes**, nonbiological
(composite; electrochem. transport properties of cone-shaped nanopore in composite **membranes**)
IT Electric conductivity
Simulation and Modeling, physicochemical
(electrochem. transport properties of cone-shaped nanopore in composite **membranes**)
IT Polyesters, uses
RL: NUU (Other use, unclassified); USES (Uses)
(electrochem. transport properties of cone-shaped nanopore in composite **membranes**)
IT Ionomers
RL: NUU (Other use, unclassified); USES (Uses)
(polyoxyalkylenes, fluorine- and sulfo-containing; electrochem. transport properties of cone-shaped nanopore in composite **membranes**)
IT 7440-22-4, **Silver**, uses 7447-40-7, Potassium chloride (KCl), uses 7647-14-5, Sodium chloride (NaCl), uses 7783-90-6, **Silver** chloride (AgCl), uses 25038-59-9, **Polyethyleneterephthalate**, uses
RL: NUU (Other use, unclassified); USES (Uses)
(electrochem. transport properties of cone-shaped nanopore in composite **membranes**)
RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 3 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:200852 HCAPLUS
DN 140:243530
TI Manufacture of heat-developable photographic material coated with electrolytic oxidized undercoat layer solution
IN Hanyu, Takeshi
PA Konica Minolta Holdings Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 27 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004077793	A2	20040311	JP 2002-237984	20020819
PRAI	JP 2002-237984		20020819		

OS MARPAT 140:243530
AB The material is manufactured by steps for (1) treating a polyester **support** by corona, plasma, UV, electron beam, or x-ray radiation, (2) oxidizing an undercoat layer coating solution by electrolysis, coating the **support** with it, drying, curing the **support** at 80-230°, and then (3) applying a photosensitive layer containing a **Ag** halide grain, an organic **Ag** salt, a reducing agent, and a binder on the **support**. It shows high adhesion, low fog, and improved storage stability.
IC ICM G03C001-76
ICS G03C001-498
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): **38**
ST heat developable photog film undercoat layer electrolysis oxidized;

polyester **support** surface treatment photog material
IT Ion exchange **membranes**
Oxidation, electrochemical
(heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)
IT Photographic films
(heat-developable; heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)
IT Electric corona
Electron beams
Plasma
Surface treatment
UV radiation
X-ray
(polyester **support** treated with; heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)
IT Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**support**; heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)
IT Oxidizing agents
(undercoat layer containing; heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)
IT 2224-15-9 4206-61-5 134098-79-6 216500-57-1 428460-98-4. 436806-84-7
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(crosslinking agent, undercoat layer containing; heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)
IT 9011-08-9, Acrylic acid-vinylidene chloride **copolymer**
26264-83-5, Acrylic acid-ethyl acrylate-vinylidene chloride **copolymer** 29760-66-5 52192-09-3, Ethyl acrylate-2-hydroxyethyl acrylate-methyl methacrylate-styrene **copolymer** 83601-69-8
661467-55-6 668448-44-0, Acrylic acid-hexyl acrylate-methyl methacrylate-styrene **copolymer** 668448-47-3, Butyl acrylate-ethyl acrylate-2-hydroxyethyl acrylate-2-propen-1-amine **copolymer** 668448-50-8
RL: TEM (Technical or engineered material use); USES (Uses)
(heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)
IT 80-43-3, Dicumyl peroxide 105-74-8, Lauroyl peroxide 127-52-6, Chloramine B 127-65-1, Chloramine T 2167-23-9, 2,2-Di-tert-butyl peroxybutane 7722-84-1, Hydrogen peroxide, uses 12262-58-7, Cyclohexanone peroxide 17025-47-7 236420-30-7 457068-91-6
623904-14-3 659726-63-3 661467-52-3 661467-53-4
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(oxidizing agent, undercoat layer containing; heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)
IT 25038-59-9, Poly(ethylene **terephthalate**), uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**support**; heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)

L37 ANSWER 4 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:139595 HCAPLUS
DN 140:209545
TI Multiplayer dry **membrane** pH electrode
IN Terashima, Masaaki; Seshimoto, Osamu

PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

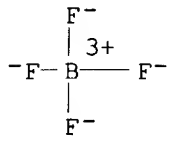
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004053401	A2	20040219	JP 2002-210804	20020719
	US 2004074786	A1	20040422	US 2003-621400	20030718
PRAI	JP 2002-210804	A	20020719		

AB The electrode comprises a nonelec. conductive **substrate**, a pair of electrode layers consisting of a **Ag** layer and a **Ag** halide layer on the **substrate** with insulation in between, and an ion (H) selective **membrane**. A sample solution introduction opening and a reference solution introduction opening are formed on the **substrate** and a liquid bridge is used to connected the 2 solns. The H ion selective **membrane** is saturated by CO2. The device can be used for determination of H ion concentration in biol. materials.

IC ICM G01N027-403
ICS G01N027-333; G01N027-416; G01N033-84
CC 79-2 (Inorganic Analytical Chemistry)
Section cross-reference(s): 9, 72
ST multiplayer dry film pH electrode biol material
IT Acidity
Biological materials
Blood analysis
pH electrodes
(multiplayer dry **membrane** pH electrode for determination of H ion concentration in biol. materials)
IT Plastics, uses
Polyesters, uses
RL: DEV (Device component use); USES (Uses)
(multiplayer dry **membrane** pH electrode for determination of H ion concentration in biol. materials)
IT 124-38-9, Carbon dioxide, uses
RL: DEV (Device component use); USES (Uses)
(H ion selective **membrane** saturated by; multiplayer dry **membrane** pH electrode for determination of H ion concentration in biol. materials)
IT 144-55-8, Sodium hydrogen carbonate, uses 10043-52-4, Calcium chloride, uses
RL: DEV (Device component use); USES (Uses)
(electrode solution containing; multiplayer dry **membrane** pH electrode for determination of H ion concentration in biol. materials)
IT 7440-70-2, Calcium, analysis 12408-02-5, Hydrogen ion, analysis
RL: ANT (Analyte); ANST (Analytical study)
(multiplayer dry **membrane** pH electrode for determination of H ion concentration in biol. materials)
IT 56-81-5, Glycerine, uses 1132-61-2, MOPS 1754-47-8, Dioctylphenylphosphonate 3586-60-5, TDDA 7440-22-4, **Silver**, uses 7783-90-6, **Silver** chloride, uses 9003-22-9, Vinyl chloride vinyl acetate **copolymer** 9003-39-8, PVP 14680-77-4, Potassium tetrakis(p-chlorophenylborate) 25038-59-9, **Polyethyleneterephthalate**, uses 40835-97-0, Phenol, 4-(1,1,3,3-tetramethylbutyl)-, hydrogen phosphate, calcium salt 55965-84-9, ProClin 300
RL: DEV (Device component use); USES (Uses)
(multiplayer dry **membrane** pH electrode for determination of H ion

concentration in biol. materials)

L37 ANSWER 5 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:123765 HCAPLUS
DN 140:393070
TI Analysis of facilitated olefin transport through polymer electrolyte membranes containing silver salts
AU Ko, Dongkyun; Kim, Jong Hak; Chung, Sung Taik; Kang, Yong Soo
CS Center for Facilitated Transport Membranes, KIST, Seoul, S. Korea
SO Memburein (2003), 13(4), 239-245
CODEN: MEMBEP; ISSN: 1226-0088
PB Membrane Society of Korea
DT Journal
LA English
AB The origin of large difference of selectivity of C3H6 over C3H8 between pure gas and mixed gas through silver polymer electrolyte membranes is investigated. Firstly, the effect of feed condition on the permeance of mixture gas (C3H6/C3H8) and the separation performance is examined Upon decrease of the C3H6 concentration, the C3H6 permeance decreased whereas the permeance of C3H8 increased, resulting in the decrease of the selectivity of C3H6/C3H8. This result is ascribed to the C3H6-induced plasticization of membranes. Exptl. results were validated by math. modeling, where pressure independent permeabilities were used.
CC 51-11 (Fossil Fuels, Derivatives, and Related Products)
ST alkene sepn alkane polymer electrolyte membranes contg silver salts
IT **Membranes**, nonbiological
Polymer electrolytes
Simulation and Modeling, physicochemical
(olefin transport through polymer electrolyte **membranes** containing silver salts)
IT Alkanes, processes
Alkenes, processes
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(separation,; olefin transport through polymer electrolyte **membranes** containing silver salts)
IT 4654-26-6, Dioctyl **terephthalate 14104-20-2 25805-17-8**, Poly(2-ethyl-2-oxazoline)
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(olefin transport through polymer electrolyte **membranes** containing silver salts)
IT 74-98-6, Propane, processes 115-07-1, Propene, processes
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(separation,; olefin transport through polymer electrolyte **membranes** containing silver salts)
IT **14104-20-2 25805-17-8**, Poly(2-ethyl-2-oxazoline)
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(olefin transport through polymer electrolyte **membranes** containing silver salts)
RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)

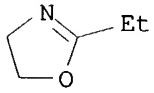


● Ag(I) +

RN 25805-17-8 HCAPLUS
CN Oxazole, 2-ethyl-4,5-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 10431-98-8
CMF C5 H9 N O



RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 6 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:20091 HCAPLUS
DN 140:73584
TI Method and apparatus for separating blood components
IN Yuasa, Takeshi; Yasunaga, Reiko
PA Kawasumi Kagaku Kogyo Kaisha, Ltd., Japan; Liijaa K. K.
SO Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004003920	A2	20040108	JP 2002-216566	20020725
PRAI	JP 2002-84853	A	20020326		

AB A method and an apparatus for separating blood components are provided, with which the basic biochem. anal. is performed without using a conventional and complicated blood serum or plasma separation method. The method comprises at least two steps: (1) a step for mixing a blood sample with a liquid prepared by dissolving at least one chemical selected from a group of nonelectrolytes, ampholytes or substances which are hardly charged, or a combination of these chems. in a **solvent** selected from water or a **solvent** which does not contain electrolytes at all or almost at all, or a combination of these **solvents**; and (2) a step for separating blood components.
IC ICM G01N033-48
CC 9-9 (Biochemical Methods)
ST blood component sepn app biochem analysis

IT Agglutinins and Lectins
RL: NUU (Other use, unclassified); USES (Uses)
(agarose-bound; method and apparatus for separating blood components)
IT Metals, uses
RL: NUU (Other use, unclassified); USES (Uses)
(compound; method and apparatus for separating blood components)
IT Cations
(divalent; method and apparatus for separating blood components)
IT Films
(flat, tubular; method and apparatus for separating blood components)
IT Amphoteric materials
Blood
Blood analysis
Blood plasma
Blood serum
Buffers
Dissolution
Erythrocyte
Filter paper
Leukocyte
Nonelectrolytes
Osmotic pressure
Paper
Platelet (blood)
Separation
Solvents
pH
(method and apparatus for separating blood components)
IT Agglutinins and Lectins
Alditols
Carbohydrates, uses
Collagens, uses
Disaccharides
Fibers
Fluoropolymers, uses
Gelatins, uses
Glass, uses
Glass fibers, uses
Inorganic compounds
Monosaccharides
Polyamides, uses
Polyamides, uses
Polycarbonates, uses
Polyesters, uses
Polyimides, uses
Polymers, uses
Polyolefins
Polysaccharides, uses
Polysulfones, uses
Polyurethanes, uses
RL: NUU (Other use, unclassified); USES (Uses)
(method and apparatus for separating blood components)
IT **Polymers**, uses
RL: NUU (Other use, unclassified); USES (Uses)
(particle; method and apparatus for separating blood components)
IT Foams
(resin; sponge; method and apparatus for separating blood components)
IT **Polymers**, uses
RL: NUU (Other use, unclassified); USES (Uses)

(water-soluble; method and apparatus for separating blood components)
IT Glass fibers, uses
RL: NUU (Other use, unclassified); USES (Uses)
(wool; method and apparatus for separating blood components)
IT 14808-60-7, Quartz, uses
RL: NUU (Other use, unclassified); USES (Uses)
(fiber; method and apparatus for separating blood components)
IT 7440-44-0, Carbon, uses
RL: NUU (Other use, unclassified); USES (Uses)
(material; method and apparatus for separating blood components)
IT 7440-22-4, **Silver**, uses
RL: NUU (Other use, unclassified); USES (Uses)
(**membrane**; **method** and apparatus for separating blood components)
IT 50-69-1, Ribose 50-70-4, Sorbitol, uses 50-99-7, D-Glucose, uses 51-43-4, Epinephrine 56-40-6, Glycine, uses 56-81-5, Glycerol, uses 56-82-6, Glycerose 57-48-7, Fructose, uses 57-50-1, Saccharose, uses 58-64-0, 5'-ADP, uses 58-86-6, Xylose, uses 59-23-4, Galactose, uses 63-42-3, Lactose 69-65-8, Mannitol 69-79-4, Maltose 74-85-1, Ethylene, uses 79-10-7D, Acrylic acid, **copolymer** 87-99-0, Xylitol 147-81-9, Arabinose 150-25-4, N,N-Bis(2-hydroxyethyl)glycine 470-55-3, Stachyose 488-81-3, Adonitol 506-32-1, Arachidonic acid 512-69-6, Raffinose 528-50-7, Cellobiose 533-67-5, Deoxyribose 557-75-5D, Vinylalcohol, **copolymer** 585-88-6, Maltitol 585-99-9, Melibiose 654-29-5, Mannoketoheptose 1109-28-0, Maltotriose 1132-61-2, 3-(N-Morpholino)propane sulfonic acid 1344-28-1, Alumina, uses 1404-55-3, Ristocetin 2152-56-9, Arabitol 2438-80-4, Fucose 3458-28-4, Mannose 3615-41-6, Rhamnose 4432-31-9, 2-(N-Morpholino)ethane sulfonic acid 5349-37-1, D-gluco-2-Heptulose 5625-37-6, 1,4-Piperazinediethanesulfonic acid 5704-04-1, N-[Tris(hydroxymethyl)methyl]glycine 6976-37-0, 2,2-Bis(hydroxymethyl)-2,2',2''-nitrilotriethanol 7365-44-8, N-Tris(hydroxymethyl)methyl-2-aminoethane sulfonic acid 7365-45-9, 2-[4-(2-Hydroxyethyl)-1-piperazinyl]ethane sulfonic acid 7439-95-4, Magnesium, uses 7440-70-2, Calcium, uses 7631-86-9, Silica, uses 7732-18-5, Water, uses 9002-04-4, Thrombin 9002-84-0, Polytetrafluoroethylene 9002-85-1, Polyvinylidene chloride 9002-86-2, Polyvinyl chloride 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-39-8, Polyvinylpyrrolidone 9003-53-6, Polystyrene 9004-34-6, Cellulose, uses 9004-35-7, Cellulose acetate 9004-54-0, Dextran, uses 9004-67-5, Methylcellulose 9004-70-0, Nitrocellulose 9005-25-8, Starch, uses 9011-14-7, Poly(methylmethacrylate) 9037-55-2, Galactan 9057-02-7, Pullulan 10010-67-0 10191-18-1, N,N-Bis(2-hydroxyethyl)-2-aminoethane sulfonic acid 11078-30-1, Galactomannan 14417-51-7, Mannobiose 16052-06-5 24937-79-9, PVDF 25014-41-9, Polyacrylonitrile 25038-59-9, **Polyethyleneterephthalate**, uses 25667-42-9, Polyethersulfone 28728-55-4, Polybrene 29915-38-6, N-Tris(hydroxymethyl)methyl-3-aminopropane sulfonic acid 64431-96-5, 1,3-Bis[tris(hydroxymethyl)methyl amino]propane 68399-77-9, 3-(N-Morpholino)-2-hydroxypropane sulfonic acid 68399-78-0 68399-80-4 68399-81-5 70331-82-7 71119-22-7 71119-23-8, 2-(N-Morpholino)ethane sulfonic acid sodium salt 75277-39-3 109191-31-3, N-(2-Acetamido)-2-aminoethane sulfonic acid
RL: NUU (Other use, unclassified); USES (Uses)
(method and apparatus for separating blood components)

L37 ANSWER 7 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:695921 HCAPLUS
DN 140:121593
TI A New PVC-**Membrane** Electrode Based on a Diazatetrathia (N2S4)

Macrocyclic Ligand for Selective Determination of **Silver** Ion
AU Singh, A. K.; Singh, Rupam; Bhattacharjee, G.
CS Department of Chemistry, Indian Institute of Technology-Roorkee, Roorkee, India
SO Analytical Letters (2003), 36(12), 2623-2638
CODEN: ANALBP; ISSN: 0003-2719
PB Marcel Dekker, Inc.
DT Journal
LA English
AB A poly(vinyl chloride) based **membrane** based on neutral macrocyclic ionophore: 2,3,4:10,11,12-dipyridine-3,11-diaza-1,5,9,13-tetrathiacyclohexadeca-2,10-diene with Na tetra-Ph borate (STB) as an anion excluder and **dibutylphthalate** (DBP) and **dioctylphthalate** (DOP) as plasticizing **solvent** mediator was prepared and studied as a **Ag**(I)-selective electrode. The best performance was observed with the **membrane** having the ligand-PVC-DBP-STB composition 1:6:1:2, which worked well over a wide concentration range (3.98 + 10-6 mol L-1-1.00 + 10-1 mol L-1) with a Nernstian slope of 55.3 mV per decade of activity between pH 3.0-7.0. This electrode showed a fast response time of 15 s and was used over a period of three months with good reproducibility (S = 0.3 mV). The selectivity coefficient for mono-, di-, and trivalent cations indicate excellent selectivity for **Ag**(I) ions over a large number of cations. Anions such as NO3- and SO42- do not interfere and the electrode also works satisfactorily in a partially nonaq. medium. The sensor was used as an indicator electrode in the potentiometric titration of **Ag** (I) with NaI solution It also was used successfully for determination of **Ag** (I) in real samples.
CC 79-2 (Inorganic Analytical Chemistry)
Section cross-reference(s): 72, 74
ST PVC **membrane** electrode diazatetrathia macrocyclic ligand **silver** detn
IT Ion-selective electrodes
(a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of **silver** ion)
IT Photographic developers
Photographic films
(a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of **silver** ion in radiol. films and photog. developing solns.)
IT Titration
(potentiometric; a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of **silver** ion by potentiometric titration)
IT 7440-22-4, **Silver**, analysis
RL: ANT (Analyte); ANST (Analytical study)
(a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of **silver** ion)
IT 9002-86-2, Ethene, chloro-, **homopolymer**
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of **silver** ion)
IT 143-66-8, Sodium tetraphenyl borate
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(anion excluder; a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of

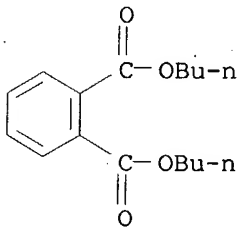
silver ion)

IT 647024-86-0
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(ionophore; a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of **silver** ion)

IT **84-74-2, Dibutylphthalate** 117-81-7, **Dioctylphthalate**
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(plasticizing **solvent** mediator; a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of **silver** ion)

IT **84-74-2, Dibutylphthalate**
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(plasticizing **solvent** mediator; a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of **silver** ion)

RN 84-74-2 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 8 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:657677 HCAPLUS
DN 139:342699
TI **Silver**(I)-selective coated-wire electrode based on an octahydroxycalix[4]arene derivative
AU Ardakani, Mohammad Mazloum; Ensafi, Ali Asghar; Niasari, Mohammad Salavati; Mirhoseini, Hossain
CS Department of Chemistry, Kashan University, Kashan, Iran
SO Analytical Sciences (2003), 19(8), 1187-1190
CODEN: ANSCEN; ISSN: 0910-6340
PB Japan Society for Analytical Chemistry
DT Journal
LA English
AB The performance of octahydroxycalix[4]arene derivative used as a neutral carrier for **silver polymeric membrane** electrode was studied. The sensor gave a good Nernstian response of 58 ± 1 mV per decade for **silver** ion in the activity range 3.3 + 10-6 to 3.3 + 10-2 M **Ag**+. The limit of detection reached 2.1 + 10-6 M **Ag**+ and exhibited high selectivity for **silver** ion against the alkali, alkaline earth and transition metal ions. The sensor can be used in wide pH range from 1.5 to 6.5. The response time of the sensor is less than 20 s. The potentiometric sensor

was used as the indicator electrode in the titration of **Ag**+ ions by sodium chloride solution

CC 72-2 (Electrochemistry)
Section cross-reference(s): 25, 79

ST **silver** potentiometric sensor ion selective electrode octahydroxycalixarene derivs

IT Sensors
(electrochem.; **silver**(I)-selective coated-wire electrode based on an octahydroxycalix[4]arene derivative)

IT Titration
(potentiometric; of AgNO3 with NaCl using **silver**(I)-selective coated-wire electrode based on an octahydroxycalix[4]arene derivative)

IT Ion-selective electrodes
Membrane electrodes
(**silver**(I)-selective coated-wire electrode based on an octahydroxycalix[4]arene derivative)

IT Macrocyclic compounds
RL: NUU (Other use, unclassified); USES (Uses)
(**silver**(I)-selective coated-wire electrode based on an octahydroxycalix[4]arene derivative)

IT 7647-14-5, Sodium chloride, reactions
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(potentiometric titration of AgNO3 with NaCl using **silver**(I)-selective coated-wire electrode based on an octahydroxycalix[4]arene derivative)

IT 7440-22-4, **Silver**, analysis
RL: ANT (Analyte); ANST (Analytical study)
(**silver**(I)-selective coated-wire electrode based on an octahydroxycalix[4]arene derivative)

IT 129779-33-5P
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); PREP (Preparation); PROC (Process)
(**silver**(I)-selective coated-wire electrode based on an octahydroxycalix[4]arene derivative)

IT 108-46-3, Resorcinol, reactions 112-31-2, n-Decylaldehyde
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(use in preparation of octahydroxycalix[4]arene derivative for **silver**(I)-selective coated-wire electrode)

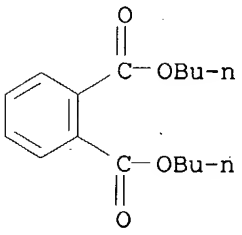
IT 7647-01-0, Hydrochloric a cid, uses
RL: NUU (Other use, unclassified); USES (Uses)
(use in preparation of octahydroxycalix[4]arene derivative for **silver**(I)-selective coated-wire electrode)

IT 143-66-8, Sodium tetraphenylborate
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(use in preparation of **silver**(I)-selective coated-wire electrode based on octahydroxycalix[4]arene derivative)

IT **84-74-2, Dibutylphthalate 109-99-9, THF**, uses 117-81-7, **Dioctylphthalate** 9002-86-2, PVC 37682-29-4, 2-Nitrophenyloctyl ether
RL: NUU (Other use, unclassified); USES (Uses)
(use in preparation of **silver**(I)-selective coated-wire electrode based on octahydroxycalix[4]arene derivative)

IT **84-74-2, Dibutylphthalate 109-99-9, THF**, uses
RL: NUU (Other use, unclassified); USES (Uses)

(use in preparation of **silver**(I)-selective coated-wire electrode based on octahydroxycalix[4]arene derivative)
RN 84-74-2 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



RN 109-99-9 HCAPLUS
CN Furan, tetrahydro- (7CI, 8CI, 9CI) (CA INDEX NAME)

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 9 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:656192 HCAPLUS
DN 139:199185
TI Fluidized bed activated by excimer plasma and materials produced therefrom
IN Janssen, Robert Allen; Lye, Jason
PA Kimberly-Clark Worldwide, Inc., USA
SO U.S. Pat. Appl. Publ., 8 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003157000	A1	20030821	US 2003-365315	20030212
	WO 2003071840	A1	20030828	WO 2003-US4731	20030214

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI	US 2002-357326P	P	20020215
	US 2003-365315	A	20030212

AB A housing for holding a fluidized bed activated by excimer plasma, includes a fluidization chamber for holding particles and gas. The fluidization chamber includes a central interior electrode contained

within, having a conductive layer and a dielec. layer. The fluidization chamber further consists of at least one containment wall made from a dielec. material. The containment wall has an inside and an outside surface. An outer electrode is wrapped around the outside of the containment wall. A feed line is in fluid communication with the fluidization chamber for feeding plasma gas into the chamber, via a porous base. A radio frequency high voltage source is in elec. connection with both the inside/interior and outside electrodes.

IC ICM B32B005-02
NCL 422139000; 422186050
CC 47-10 (Apparatus and Plant Equipment)
ST excimer plasma activated fluidized bed
IT Organic compounds, uses
RL: DEV (Device component use); USES (Uses)
(aliphatic, reagents; fluidized bed activated by excimer plasma and materials produced therefrom)
IT Polyamides, uses
Polyesters, uses
Polyolefins
Polysiloxanes, uses
Polyurethanes, uses
RL: DEV (Device component use); USES (Uses)
(beads; fluidized bed activated by excimer plasma and materials produced therefrom)
IT Nanotubes
(carbon, particle; fluidized bed activated by excimer plasma and materials produced therefrom)
IT Plasma
(excimer; fluidized bed activated by excimer plasma and materials produced therefrom)
IT Fluidized beds
Frits
(fluidized bed activated by excimer plasma and materials produced therefrom)
IT Hydrocarbons, reactions
RL: RGT (Reagent); RACT (Reactant or reagent)
(fluoro, reagents; acrylate and methacrylate esters; fluidized bed activated by excimer plasma and materials produced therefrom)
IT Chlorides, reactions
RL: RGT (Reagent); RACT (Reactant or reagent)
(organic, fluoro- or perfluoro-; reagents; acrylate and methacrylate esters; fluidized bed activated by excimer plasma and materials produced therefrom)
IT Ceramics
(particle; fluidized bed activated by excimer plasma and materials produced therefrom)
IT Aluminosilicates, uses
Glass beads
Zeolites (synthetic), uses
RL: DEV (Device component use); USES (Uses)
(particle; fluidized bed activated by excimer plasma and materials produced therefrom)
IT **Membranes**, nonbiological
(**polymeric**; fluidized bed activated by excimer plasma and materials produced therefrom)
IT Amines, reactions
Carboxylic acids, reactions
Silanes
RL: RGT (Reagent); RACT (Reactant or reagent)

(reagents; acrylate and methacrylate esters; fluidized bed activated by excimer plasma and materials produced therefrom)

IT Acrylic **polymers**, uses
Alcohols, uses
RL: DEV (Device component use); USES (Uses)
(reagents; fluidized bed activated by excimer plasma and materials produced therefrom)

IT 9002-86-2, Poly(vinyl chloride) 9002-88-4, Polyethylene 9002-89-5 9003-07-0, Polypropylene 9003-20-7, Polyvinyl acetate 9003-39-8, Poly(vinylpyrrolidone) 9003-53-6, Polystyrene 9003-55-8, Styrene butadiene **copolymer** 9011-14-7, Poly(methylmethacrylate) 24981-14-4, Poly(vinyl fluoride) 25038-54-4, Nylon 6, uses 25038-59-9, Polyethylene **terephthalate**, uses 25087-26-7, Poly(methacrylic acid) 32131-17-2, Nylon 6,6, uses
RL: DEV (Device component use); USES (Uses)
(beads; fluidized bed activated by excimer plasma and materials produced therefrom)

IT 7429-90-5, Aluminum, uses 7440-22-4, **Silver**, uses 7440-57-5, Gold, uses
RL: DEV (Device component use); USES (Uses)
(electrode; fluidized bed activated by excimer plasma and materials produced therefrom)

IT 1309-48-4, Magnesium oxide, uses 1314-13-2, Zinc oxide, uses 1314-61-0, Tantalum pentoxide 1332-37-2, Iron oxide, uses 1344-28-1, Alumina, uses 7631-86-9, Silicon dioxide, uses 11105-01-4, Silicon oxynitride 13463-67-7, Titanium dioxide, uses
RL: DEV (Device component use); USES (Uses)
(particle; fluidized bed activated by excimer plasma and materials produced therefrom)

IT 79-10-7D, Acrylic acid, epoxidized 1333-74-0, Hydrogen, reactions 7664-41-7, Ammonia, reactions 7782-44-7, Oxygen, reactions 11104-93-1, Nitrogen oxide, reactions 12624-32-7, Sulfur oxide
RL: RGT (Reagent); RACT (Reactant or reagent)
(reagents; acrylate and methacrylate esters; fluidized bed activated by excimer plasma and materials produced therefrom)

L37 ANSWER 10 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:222028 HCAPLUS
DN 138:239183
TI **Silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability
IN Kim, Hoon Sik; Kang, Yong Soo; Lee, Byung Gwon; Lee, Hyun Joo; Ryu, Jae Hee
PA Korea Institute of Science and Technology, S. Korea
SO U.S. Pat. Appl. Publ., 5 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003052056	A1	20030320	US 2002-194303	20020715
	US 6706771	B2	20040316		
	US 2004154980	A1	20040812	US 2004-773257	20040209
PRAI	KR 2001-42699	A	20010716		
	US 2002-194303	A3	20020715		

OS MARPAT 138:239183
AB The present invention relates to **polymer membranes** for separating olefins from paraffins which have the similar mol. size and close

b.p. More particularly, it relates to a **silver** salt-containing facilitated transport **membrane** for olefin separation, and also a method for producing the same. An object of the present invention is to provide a **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability, and also a method for preparing the same, which exhibits no deterioration in **membrane** performance even when operated for an extended period of time. The facilitated transport **membrane** for olefin/paraffin separation of the present invention comprises a **polymer**, a **silver** salt, and a **phthalate** compound ROOC-o-C6H4-COOR, wherein R denotes an alkyl group of 2 to 8 carbon atoms or a Ph group. Thus, a **membrane** for separation propylene/propane is fabricated by coating a microporous polysulfone **membrane** with a solution containing polyvinylpyrrolidone, **silver** tetrafluoroborate, and di-Bu **phthalate**.

IC ICM B01D071-28
NCL 210500280; 210500300; 210500420
CC 38-3 (**Plastics** Fabrication and Uses)
ST **silver** salt facilitated transport **membrane** olefin sepn
IT Polyvinyl acetals
RL: **POF (Polymer in formulation)**; PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(formals; production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)
IT Separation
(gas; production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)
IT Polysulfones, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(microporous **membrane**; production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)
IT Acrylic **polymers**, uses
Polyamines
RL: **POF (Polymer in formulation)**; PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)
IT Alkanes, preparation
Alkenes, preparation
RL: PUR (Purification or recovery); PREP (Preparation)
(production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)
IT **69488-61-5**
RL: **POF (Polymer in formulation)**; PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(assume monomers; production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)
IT **84-62-8, Diphenylphthalate 84-74-2, Dibutylphthalate 117-84-0, Dioctylphthalate 131-11-3, Dimethylphthalate 2923-28-6, Silver** trifluoromethanesulfonate **7783-93-9, Silver** perchlorate **14104-20-2, Silver** tetrafluoroborate **26042-63-7, Silver** hexafluorophosphate **26042-64-8, Silver** hexafluoroantimonate
RL: MOA (Modifier or additive use); USES (Uses)
(production of **silver** salt-containing facilitated transport

membrane for olefin separation having improved stability)

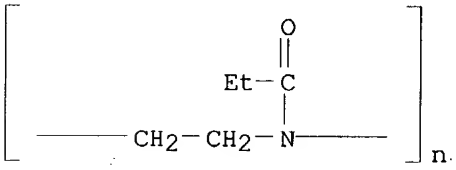
IT **109-99-9**, Tetrahydrofuran, uses
RL: NUU (Other use, unclassified); USES (Uses)
(production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)

IT **9003-01-4**, Polyacrylic acid **9003-20-7**, Polyvinylacetate **9003-39-8**, Polyvinylpyrrolidone 9004-35-7, Cellulose acetate 9004-36-8, Cellulose acetate butyrate **9011-14-7**, Polymethylmethacrylate **25038-87-3**, Polyvinylmethylketone **25805-17-8**, Poly(2-ethyl-2-oxazoline)
RL: **POF (Polymer in formulation)**; PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)

IT 74-84-0P, Ethane, preparation 74-85-1P, Ethene, preparation 74-98-6P, Propane, preparation 106-97-8P, Butane, preparation 106-98-9P, 1-Butene, preparation 109-66-0P, Pentane, preparation 109-67-1P, 1-Pentene 115-07-1P, Propylene, preparation
RL: PUR (Purification or recovery); PREP (Preparation)
(production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)

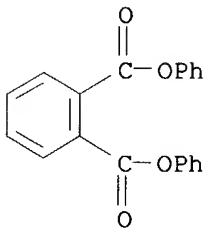
IT **69488-61-5**
RL: **POF (Polymer in formulation)**; PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(assume monomers; production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)

RN 69488-61-5 HCAPLUS
CN Poly[[(1-oxopropyl)imino](1,2-ethanediyl)] (9CI) (CA INDEX NAME)

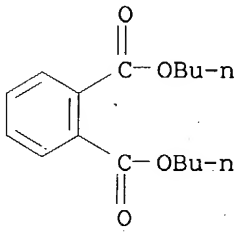


IT **84-62-8**, **Diphenylphthalate** **84-74-2**, **Dibutylphthalate** **117-84-0**, **Dioctylphthalate** **131-11-3**, **Dimethylphthalate** **2923-28-6**, **Silver** trifluoromethanesulfonate **7783-93-9**, **Silver** perchlorate **14104-20-2**, **Silver** tetrafluoroborate **26042-63-7**, **Silver** hexafluorophosphate **26042-64-8**, **Silver** hexafluoroantimonate
RL: MOA (Modifier or additive use); USES (Uses)
(production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)

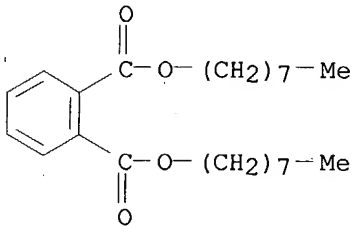
RN 84-62-8 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, diphenyl ester (9CI) (CA INDEX NAME)



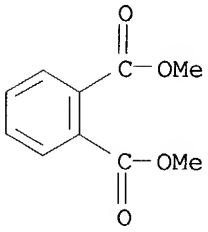
RN 84-74-2 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



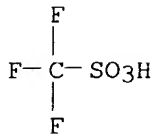
RN 117-84-0 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dioctyl ester (9CI) (CA INDEX NAME)



RN 131-11-3 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dimethyl ester (9CI) (CA INDEX NAME)

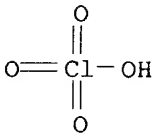


RN 2923-28-6 HCAPLUS
CN Methanesulfonic acid, trifluoro-, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



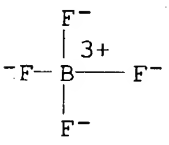
● Ag(I)

RN 7783-93-9 HCAPLUS
CN Perchloric acid, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



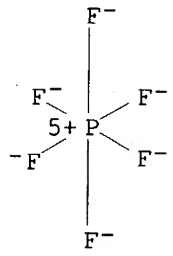
● Ag(I)

RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



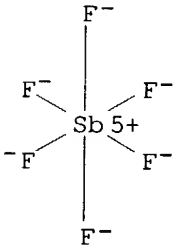
● Ag(I) $^{+}$

RN 26042-63-7 HCAPLUS
CN Phosphate(1-), hexafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

RN 26042-64-8 HCAPLUS
CN Antimonate(1-), hexafluoro-, silver(1+), (OC-6-11)- (9CI) (CA INDEX NAME)



● Ag(I) +

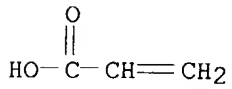
IT **109-99-9**, Tetrahydrofuran, uses
RL: NUU (Other use, unclassified); USES (Uses)
(production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)
RN 109-99-9 HCAPLUS
CN Furan, tetrahydro- (7CI, 8CI, 9CI) (CA INDEX NAME)

IT **9003-01-4**, Polyacrylic acid **9003-20-7**, Polyvinylacetate **9003-39-8**, Polyvinylpyrrolidone **9011-14-7**, Polymethylmethacrylate **25038-87-3**, Polyvinylmethylketone **25805-17-8**, Poly(2-ethyl-2-oxazoline)
RL: **POF (Polymer in formulation)**; PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)
RN 9003-01-4 HCAPLUS

CN 2-Propenoic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

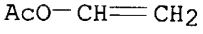
CRN 79-10-7
CMF C3 H4 O2



RN 9003-20-7 HCAPLUS
CN Acetic acid ethenyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

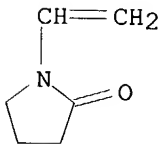
CRN 108-05-4
CMF C4 H6 O2



RN 9003-39-8 HCAPLUS
CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

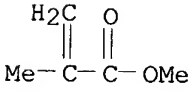
CRN 88-12-0
CMF C6 H9 N O



RN 9011-14-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

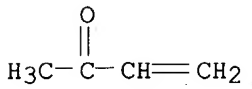
CRN 80-62-6
CMF C5 H8 O2



RN 25038-87-3 HCAPLUS
CN 3-Buten-2-one, homopolymer (9CI) (CA INDEX NAME)

CM 1

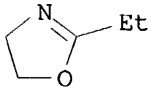
CRN 78-94-4
CMF C4 H6 O



RN 25805-17-8 HCAPLUS
CN Oxazole, 2-ethyl-4,5-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 10431-98-8
CMF C5 H9 N O



L37 ANSWER 11 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:927733 HCAPLUS
DN 138:30831
TI Flexible electrochromic structure and methods for the production thereof
IN Hourquebie, Patrick; Topart, Patrice; Pages, Hubert
PA Commissariat a l'Energie Atomique, Fr.
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DT Patent
LA French
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002097519	A2	20021205	WO 2002-FR1807	20020529
	WO 2002097519	A3	20030320		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	FR 2825481	A1	20021206	FR 2001-7144	20010531
	FR 2825481	B1	20030718		
	EP 1390803	A2	20040225	EP 2002-747490	20020529
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2004520632	T2	20040708	JP 2003-500638	20020529
	US 6798554	B2	20040928	US 2003-332979	20030123
PRAI	FR 2001-7144	A	20010531		

WO 2002-FR1807 W 20020529

AB The invention relates to a flexible electrochromic structure which operates as a reflector at wavelengths ranging from (0,35) to (20) μm. The inventive structure comprises a microporous **membrane** including an electrolyte and the following items successively disposed in the following order on each of the surfaces of said microporous **membrane** in a sym. manner in relation to said **membrane**: a layer forming a reflecting electrode, an electrochromic conductive **polymer** layer, and a flexible transparent window at wavelengths ranging from (0,35) and (20) μm.

IC ICM G02F

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): **36**

ST electrochromic device flexible **polymer**

IT **Polymers**, uses
RL: DEV (Device component use); USES (Uses)
(co-, conducting; electrochromic device with)

IT Polysulfones, uses
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(conducting; electrochromic device with)

IT Conducting **polymers**
Electrochromic devices
Electrodes
Electrolytes
Heat transfer
Optical reflectors
(electrochromic device with)

IT Acrylic **polymers**, uses
Fluoropolymers, uses
Polyamides, uses
Polycarbonates, uses
Polyesters, uses
Polyimides, uses
Polyoxyalkylenes, uses
Polyurethanes, uses
RL: DEV (Device component use); USES (Uses)
(electrochromic device with)

IT Electrooptical instruments
(electrochromic reflectors; electrochromic device with)

IT **Membranes**, nonbiological
(microporous; electrochromic device with)

IT Conducting **polymers**
(polythiophenes; electrochromic device with)

IT Metals, uses
Noble metals
RL: DEV (Device component use); USES (Uses)
(reflecting electrodes; electrochromic device with)

IT Sulfonic acids, uses
RL: DEV (Device component use); USES (Uses)
(salts, electrolyte; electrochromic device with)

IT 9033-83-4, Poly(phenylene) 25656-57-9, Poly(diphenylamine) 26747-38-6 31135-62-3D, Aminoquinoline, **polymers** 96638-49-2, Poly(phenylene vinylene) 116267-93-7, Poly(4-aminobiphenyl) 117051-73-7, Poly(diphenyl benzidine) 142189-51-3D, derivs.
RL: DEV (Device component use); USES (Uses)
(conducting **polymer**; electrochromic device with)

IT 25233-30-1, Polyaniline 25233-34-5, Polythiophene 30604-81-0,

Polypyrrole
RL: DEV (Device component use); USES (Uses)
(conducting; electrochromic device with)
IT 1330-69-4, Dodecylbenzenesulfonate 16722-51-3, Tosylate, uses 26101-52-0 27119-07-9 50851-57-5 50852-11-4, Naphthalene sulfonate
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(dopant for conducting **polymer**; electrochromic device with)
IT 733-44-8, Tetraethylammonium tosylate
RL: CPS (Chemical process); DEV (Device component use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(electrochromic device with)
IT 28038-50-8, Sodium poly(4-styrenesulfonate) 126213-50-1, 3,4-Ethylenedioxythiophene
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(electrochromic device with)
IT 1576-84-7 9002-84-0, Poly(tetrafluoroethylene) 9002-86-2, Poly(vinyl chloride) 9002-88-4, Polyethylene 9002-89-5, Poly(vinyl **alcohol**) 9003-07-0, Polypropylene 9003-29-6, Polybutylene 9003-42-3, Poly(ethylmethacrylate) 9010-79-1D, fluorinated 9011-14-7, PMMA 25038-59-9, Polyethylene **terephthalate**, uses 25322-68-3, Poly(ethylene glycol) 30396-85-1, Acrylonitrile-methyl methacrylate **copolymer**
RL: DEV (Device component use); USES (Uses)
(electrochromic device with)
IT 477907-15-6
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(electrochromic device with)
IT 96-48-0, Butyrolactone 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate 111-96-6, Diglyme 616-38-6, Dimethyl carbonate 17009-90-4D, Imidazolium, cations 82113-65-3, Bis((trifluoromethyl)sulfonyl)imide 90076-65-6, Lithium bis((trifluoromethyl)sulfonyl)imide
RL: DEV (Device component use); USES (Uses)
(electrolyte; electrochromic device with)
IT 7440-06-4, Platinum, uses 7440-22-4, **Silver**, uses 7440-57-5, Gold, uses
RL: DEV (Device component use); USES (Uses)
(reflecting electrodes; electrochromic device with)

L37 ANSWER 12 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:925576 HCAPLUS
DN 137:390839
TI Organic electroluminescent devices and manufacture
IN Ikuta, Shigeo
PA Matsushita Electric Industrial Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002352962	A2	20021206	JP 2001-158722	20010528
PRAI	JP 2001-158722		20010528		

AB The devices comprise: a glass **substrate**; an ITO 1st electrode;

an organic light emitting layer; a 2nd electrode comprising a matrix resin containing an elec. conductive metal oxide particle.
IC ICM H05B033-26
ICS H05B033-10; H05B033-14
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
ST org electroluminescent device
IT Electric conductivity
Electrodes
Glass **substrates**
Membranes, nonbiological
Thin film transistors
Transistors
(organic electroluminescent devices and manufacture)
IT Acrylic **polymers**, uses
Epoxy resins, uses
Oxides (inorganic), uses
Polycarbonates, uses
Polyesters, uses
Polyurethanes, uses
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent devices and manufacture)
IT 2085-33-8, Tris(8-quinolinolato)aluminum 7429-90-5, Aluminum, uses 7439-93-2, Lithium, uses 7440-22-4, **Silver**, uses 7789-24-4, Lithium fluoride (LiF), uses 11100-79-1 25038-59-9, **Polyethyleneterephthalate**, uses 50926-11-9, ITO 58739-36-9
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent devices and manufacture)

L37 ANSWER 13 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:833302 HCAPLUS
DN 137:351509
TI Immortal cell line derived from the grouper Epinephelus coioides and the applications thereof
IN Chi, Shau-Chi
PA Taiwan
SO U.S. Pat. Appl. Publ., 20 pp., Cont.-in-part of U.S. 6,436,702.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002159993	A1	20021031	US 2001-4414	20011206
	US 6436702	B1	20020820	US 1999-450696	19991130
	US 2002164787	A1	20021107	US 2001-998212	20011203
	US 6566117	B2	20030520		
PRAI	US 1998-110699P	P	19981203		
	US 1999-450696	A2	19991130		

AB The invention comprises the generation of antibodies against nervous necrosis virus (NNV) and infectious pancreatic necrosis (IPNV) virus. The antibodies include polyclonal and monoclonal antibodies. NNV and IPNV are produced in an immortal cell line (GF-1) derived from the grouper fish E. coioides fin tissue, ATCC deposit number PTA-859. The present invention also provides methods for detecting viral infections in fish using enzyme immunoassay (EIA).
IC ICM A61K039-395
ICS A61K039-42; C12N005-00; C12N005-02; C12N005-06; C12N005-16
NCL 424130100

CC 15-3 (Immunochemistry)
Section cross-reference(s): 9, 10, 12, 17, 63
ST immortal cell line grouper Epinephelus antibody fish infection virus
IT Animal cell line
(BGF-1; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
IT Latex
(Blue, color particles; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
IT Animal cell line
(GF-1; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
IT Infectious pancreatic necrosis virus
(IPNV; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
IT Animal virus
(NNV (nervous necrosis virus); immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
IT Test kits
(SBA clonotyping system III; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
IT Monoglycerides
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(acetates, plasticizer; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
IT Immunostimulants
(adjuvants; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
IT PCR (**polymerase** chain reaction)
(amplification; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
IT Animal virus
(aquatic; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
IT Epinephelus awoara
(banded grouper; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
IT Drug delivery systems
(carriers, solid; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme

immunoassay)
IT Drug delivery systems
(enteric coating; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
IT Immunoassay
(enzyme-linked immunosorbent assay; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
IT Immunoassay
(enzyme; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
IT Anarhichas minor
Ascites
Brain
Cyprinus
Diagnosis
Eel
Eel herpes virus Formosa
Epinephelus coioides
Fish
Grouper
Halibut
Hard clam reovirus
Hybridoma
Intestine
Lates calcarifer
Lubricants
Mus
Oryctolagus cuniculus
Pancreas
Parrot fish
Perca
Pike
Plasticizers
Salmon
Sea bass
Spinal cord
Striped jack
Takifugu rubripes
Trout
Turbot
Verasper moseri
(immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
IT Antibodies and Immunoglobulins
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); DGN (Diagnostic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
IT Immunoassay
(immunoblotting; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus

antibodies and detection of viral infection in fish using enzyme immunoassay)

IT Immunoassay
(immunofluorescent immunostaining; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT Vaccines
(killed, oral; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT Polyamides, analysis
Polyesters, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(**membranes**, solid carriers; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT Antibodies and Immunoglobulins
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); DGN (Diagnostic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(monoclonal; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT Castor oil
Paraffin oils
Polyoxyalkylenes, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(plasticizer; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT Filter paper
Membranes, nonbiological
(solid carriers; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT 9041-22-9, β Glucan
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(adjuvant; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT 9002-89-5, Polyvinyl **alcohol** 9005-25-8, Starch, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(binder; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT 7440-22-4, **Silver**, analysis 7440-57-5, Gold, analysis 7782-49-2, Selenium, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(color particles; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT 9001-78-9
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(detection agent; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT 63-42-3, Lactose
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(diluent; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT 9063-38-1, Sodium starch glycolate
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(disintegrant; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT 77-94-1, Tributyl citrate 9004-38-0, Cellulose acetate **phthalate** 9050-31-1, Hydroxypropylmethyl cellulose **phthalate** 37205-99-5, Carboxymethylethyl cellulose 52907-01-4, Cellulose acetate trimellitate 53237-50-6 71138-97-1, Hydroxypropylmethyl cellulose acetate succinate
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(enteric coating; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT 9003-99-0, Peroxidase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(horseradish, detection agent; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT 557-04-0, Magnesium stearate
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lubricant; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT 9004-70-0, Nitrocellulose
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(**membranes**, solid carriers; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT 56-81-5, Glycerol, biological studies 60-01-5, Glycerol tributyrate 77-90-7, Acetyl tributyl citrate 77-93-0, Triethyl citrate 84-66-2, Diethyl **phthalate** **84-74-2**, Dibutyl **phthalate** 102-76-1, Triacetin 109-43-3, Dibutyl sebacate 110-27-0, Isopropyl myristate 112-80-1, Oleic acid, biological studies 9003-39-8, PVPK-90 25322-68-3, PEG 25322-69-4, Polypropylene glycol 31566-31-1, Glycerol monostearate
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(plasticizer; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT 34314-06-2, Tetramethyl benzidine

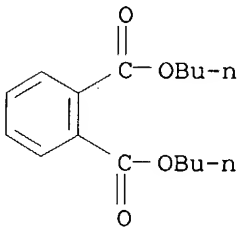
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(reagent; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-53-6, Polystyrene 9012-36-6, Agarose
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(solid carriers; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT 474566-61-5 474566-62-6
RL: PRP (Properties)
(unclaimed sequence; immortal cell line derived from the grouper Epinephelus coioides and the applications thereof)

IT **84-74-2**, Dibutyl **phthalate**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(plasticizer; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

RN 84-74-2 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



L37 ANSWER 14 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:482697 HCAPLUS
DN 137:47996
TI Polymer composites containing nanometer metal granules and manufacturing methods therefor
IN Won, Jeon Ok; Kang, Yon Soo; Chung, Bom Sok; Yoon, Yo Sang
PA Korea Institute of Science and Technology, S. Korea
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002179931	A2	20020626	JP 2001-2447	20010110
	US 2002145132	A1	20021010	US 2001-840138	20010424
	US 6712997	B2	20040330		
PRAI	KR 2000-72958	A	20001204		

AB Metal precursors are dispersed in polymer matrixes and irradiated with light to reduce to metals. Thus, a poly(2-ethyl-2-oxazoline) film containing AgCF3SO3 was irradiated with UV.

IC ICM C08L101-02
ICS C08J003-20; C08J007-00; C08K003-08

CC 37-6 (**Plastics** Manufacture and Processing)
ST polyethyloxazoline silver composite; UV radiation polyethyloxazoline silver fluoromethanesulfonate film
IT Dendritic polymers
RL: **POF (Polymer in formulation)**; USES (Uses)
(hyperbranched; polymer composites containing nanometer metal granules)
IT Polymers, uses
RL: **POF (Polymer in formulation)**; USES (Uses)
(linear; polymer composites containing nanometer metal granules)
IT Polyamines
RL: **POF (Polymer in formulation)**; PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(polyamide-; polymer composites containing nanometer metal granules)
IT Polyamides, properties
RL: **POF (Polymer in formulation)**; PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(polyamine-; polymer composites containing nanometer metal granules)
IT Dispersion (of materials)
Light
Nanocomposites
Plastic films
Reduction, photochemical
UV radiation
(polymer composites containing nanometer metal granules)
IT Metals, preparation
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(polymer composites containing nanometer metal granules)
IT Reinforced plastics
RL: IMF (Industrial manufacture); **POF (Polymer in formulation)**; PRP (Properties); PREP (Preparation); USES (Uses)
(polymer composites containing nanometer metal granules)
IT Alloys, uses
RL: MOA (Modifier or additive use); USES (Uses)
(polymer composites containing nanometer metal granules)
IT Polyamides, uses
RL: **POF (Polymer in formulation)**; USES (Uses)
(polymer composites containing nanometer metal granules)
IT Polycarbonates, uses
RL: **POF (Polymer in formulation)**; USES (Uses)
(polymer composites containing nanometer metal granules)
IT Polyesters, uses
RL: **POF (Polymer in formulation)**; USES (Uses)
(polymer composites containing nanometer metal granules)
IT Dendritic polymers
Polyoxyalkylenes, properties
RL: **POF (Polymer in formulation)**; PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(polymer composites containing nanometer metal granules)
IT Oxides (inorganic), reactions
Salts, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(polymer composites containing nanometer metal granules)
IT 7439-89-6P, Iron, preparation 7440-22-4P, Silver, preparation 7440-48-4P, Cobalt, preparation 7440-57-5P, Gold, preparation
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(polymer composites containing nanometer metal granules)
IT 7439-96-5, Manganese, uses 7440-00-8, Neodymium, uses 7440-02-0,

Nickel, uses 7440-05-3, Palladium, uses 7440-06-4, Platinum, uses 7440-10-0, Praseodymium, uses 7440-19-9, Samarium, uses 7440-21-3, Silicon, uses 7440-32-6, Titanium, uses 7440-50-8, Copper, uses 7440-54-2, Gadolinium, uses 7440-67-7, Zirconium, uses
RL: MOA (Modifier or additive use); USES (Uses)
(polymer composites containing nanometer metal granules)

IT 9002-86-2, PVC 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-29-6, Polybutylene 9003-53-6, Polystyrene 9010-79-1, Ethylene-propylene copolymer **9011-14-7**, Polymethyl methacrylate 24968-12-5, Poly(butylene **terephthalate**) 25038-54-4, Nylon 6, uses 25038-59-9, Pet polyester, uses 25068-26-2, Poly(4-methyl-1-pentene) 25212-15-1, Polypentadiene 26062-94-2, Poly(butylene **terephthalate**) 61722-01-8, Butene-ethylene-propylene copolymer
RL: **POF (Polymer in formulation)**; USES (Uses)
(polymer composites containing nanometer metal granules)

IT **9003-39-8**, Poly(vinylpyrrolidone) 25322-68-3, Polyethylene oxide **25805-17-8**, Poly(2-ethyl-2-oxazoline)
RL: **POF (Polymer in formulation)**; PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(polymer composites containing nanometer metal granules)

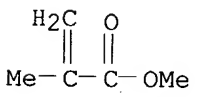
IT **2923-28-6**, Silver trifluoromethanesulfonate 7646-79-9, Cobaltous chloride, reactions 7758-94-3, Ferrous chloride 7761-88-8, Silver nitrate, reactions **7783-93-9**, Silver perchlorate **14104-20-2**, Silver borofluoride 16903-35-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(polymer composites containing nanometer metal granules)

IT **9011-14-7**, Polymethyl methacrylate
RL: **POF (Polymer in formulation)**; USES (Uses)
(polymer composites containing nanometer metal granules)

RN 9011-14-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 80-62-6
CMF C5 H8 O2

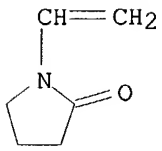


IT **9003-39-8**, Poly(vinylpyrrolidone) **25805-17-8**, Poly(2-ethyl-2-oxazoline)
RL: **POF (Polymer in formulation)**; PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(polymer composites containing nanometer metal granules)

RN 9003-39-8 HCAPLUS
CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

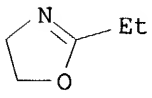
CRN 88-12-0
CMF C6 H9 N O



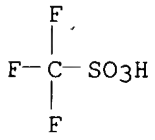
RN 25805-17-8 HCAPLUS
CN Oxazole, 2-ethyl-4,5-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 10431-98-8
CMF C5 H9 N O

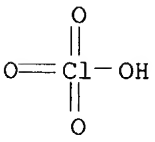


IT **2923-28-6**, Silver trifluoromethanesulfonate **7783-93-9**, Silver perchlorate **14104-20-2**, Silver borofluoride
RL: RCT (Reactant); RACT (Reactant or reagent)
(polymer composites containing nanometer metal granules)
RN 2923-28-6 HCAPLUS
CN Methanesulfonic acid, trifluoro-, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



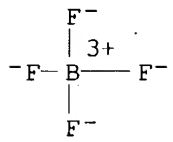
● Ag(I)

RN 7783-93-9 HCAPLUS
CN Perchloric acid, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

L37 ANSWER 15 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:314825 HCAPLUS
DN 136:327629
TI Flexible and porous **membranes** and adsorbents, and **method** for their production
IN Noack, Andreas
PA Germany
SO PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002032558	A1	20020425	WO 2001-EP12131	20011019
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	DE 10051910	A1	20020502	DE 2000-10051910	20001019
	EP 1372832	A1	20040102	EP 2001-978441	20011019
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2004524945	T2	20040819	JP 2002-535791	20011019
PRAI	DE 2000-10051910	A	20001019		
	WO 2001-EP12131	W	20011019		

AB The invention relates to a method for producing flexible and porous adsorbents based on oxidic and/or non-oxidic ceramic material including carbon. A flat base matrix is produced on a paper producing machine, whose components are held together essentially by hydrogen bridge bonds. **Polymeric** additives are applied and/or impregnated onto one or both sides of the surface of the base matrix. The base matrix is treated under pyrolytic conditions at an increased temperature in an atmospheric containing essentially no oxygen. This **method** can also **produce** **membranes** of flexible material for their use to sep. and/or purify liqs. This invention provides **membranes** and **membrane** **substrates** with high packing d. while at the same time providing optimal flow-through profiles and that are not dependent on the carrier despite low thickness and low material transport resistance. The manufacturing

process provides thin flat, stable and flexible materials, which enable inexpensive and precise **production** of **membranes** with defined material separation properties.

IC ICM B01D069-12
ICS B01D071-02; B01D053-22; C04B041-50; D01F009-14

CC 48-1 (Unit Operations and Processes)
Section cross-reference(s): 59

ST **membrane** flexible porous ceramic **manuf**

IT Nanotubes
(carbon; flexible and porous **membranes** and adsorbents, and **method** for their production)

IT Cannabis sativa
Cocos nucifera
(fiber; flexible and porous **membranes** and adsorbents, and **method** for their production)

IT Agave fourcroydes
Bagasse
Linters
Medicago sativa
Musa textilis
Phormium
Stipa tenacissima
Straw
(fibers; flexible and porous **membranes** and adsorbents, and **method** for their production)

IT Plastics, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(fibers; flexible and porous **membranes** and adsorbents, and **method** for their production)

IT Adsorbents
Boehmeria nivea
Ceiba pentandra
Ceramics
Coir
Corchorus
Cotton fibers
Hibiscus cannabinus
Hibiscus sabdariffa
Linum usitatissimum
Membranes, nonbiological
Mineral wool
Paper
Pitch
Soot
Urena
Viscose
(flexible and porous **membranes** and adsorbents, and **method** for their production)

IT Silanes
RL: RCT (Reactant); RACT (Reactant or reagent)
(flexible and porous **membranes** and adsorbents, and **method** for their production)

IT Acrylic **polymers**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)

IT Asbestos
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and

method for their production)
IT Asphalt
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Carbon fibers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Epoxy resins, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Fibers
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Fullerenes
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Glass fibers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Kaolin, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Metallic fibers
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Phenolic resins, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Polyamides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Polycarbonates, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Polysaccharides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Polyurethanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)

(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Rubber, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Sisal
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Zeolites (synthetic), uses
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Textiles
(linen; flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Phenolic resins, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(novolak; flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Wood
(pine, fibers; flexible and porous **membranes** and adsorbents, and **method** for their production)
IT Synthetic fibers
RL: TEM (Technical or engineered material use); USES (Uses)
(quartz; flexible and porous **membranes** and adsorbents, and **method** for their production)
IT 75-78-5, Dichlorodimethylsilane 75-79-6, Methyltrichlorosilane 78-10-4, Tetraethoxysilane 7664-41-7, Ammonia, reactions 7705-07-9, Titanium chloride, reactions 7803-62-5, Silane, reactions 10294-34-5, Boron chloride 13709-77-8 415706-71-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
IT 409-21-2, Silicon carbide, uses 1344-28-1, Alumina, uses 7440-05-3, Palladium, uses 7440-06-4, Platinum, uses 7440-22-4, **Silver**, uses 7440-44-0, Carbon, uses 7440-57-5, Gold, uses 7631-86-9, Silica, uses 9002-88-4, Polyethylene 9002-89-5, Polyvinyl **alcohol** 9003-07-0, Polypropylene 9003-31-0, Polyisoprene 9003-53-6, Polystyrene 9003-55-8, Butadiene styrene **copolymer** 9004-34-6, Cellulose, uses 9004-34-6D, Cellulose, esters and ethers 9004-35-7, Cellulose acetate 9005-25-8, Starch, uses 9005-32-7, Alginic acid 9005-53-2, Lignin, uses 9005-82-7, Amylose 9010-98-4, Polychloroprene 10043-11-5, Boron nitride, uses 12194-71-7, Perovskite 25014-41-9, Polyacrylonitrile 25038-59-9, Polyethylene **terephthalate**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible and porous **membranes** and adsorbents, and **method** for their production)
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 16 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:314493 HCAPLUS
DN 136:306396
TI Ion selective monoelectrode complex
IN Terashima, Masaaki; Seshimoto, Osamu
PA Fuji Photo Film Co., Ltd., Japan

SO Eur. Pat. Appl., 17 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1199559	A2	20020424	EP 2001-124264	20011017
	EP 1199559	A3	20040128		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2002122563	A2	20020426	JP 2000-316977	20001017
	US 2002063058	A1	20020530	US 2001-981528	20011017
	US 6767578	B2	20040727		
PRAI	JP 2000-316977	A	20001017		

AB The invention concerns an ion selective monoelectrode complex which is favorably employable to manufacture an ion activity measuring apparatus, has on a common non-electroconductive **support** sheet, plural ion selective monoelectrodes each of which is composed of an electrode composite consisting of, in order, a **silver** metal layer, a **silver** halide layer, an electrolytic material layer, and an ion selective **membrane**, and an electroconductive terminal which is elec. connected to the **silver** metal layer and which has an exposed surface, under the condition that the ion selective monoelectrodes are aligned, without elec. contact with each other, along an imaginary line bridging the electrode composite and the electroconductive terminal. Diagrams describing the apparatus assembly and operation are given.

IC ICM G01N027-30
CC 9-1 (Biochemical Methods)
ST ion monoelectrode app sodium potassium chloride **polymer** film **membrane**
IT Analytical apparatus
Electrodes
Films
Ion-selective electrodes
Ions
Membranes, nonbiological
(ion selective monoelectrode complex)
IT Polyesters, uses
Polymers, uses
RL: DEV (Device component use); USES (Uses)
(ion selective monoelectrode complex)
IT **Silver** halides
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(ion selective monoelectrode complex)
IT **Membranes**, nonbiological
(ion-selective; ion selective monoelectrode complex)
IT Metals, uses
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(**silver**; ion selective monoelectrode complex)
IT 16887-00-6, Chloride ion, analysis 17341-25-2, Sodium ion, analysis 24203-36-9, Potassium ion, analysis
RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
(ion selective monoelectrode complex)
IT 9003-22-9, Vinyl chloride vinyl acetate **copolymer** 25038-59-9, Polyethylene **terephthalate**, uses
RL: DEV (Device component use); USES (Uses)
(ion selective monoelectrode complex)

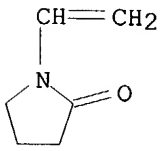
IT 7440-22-4, **Silver**, uses
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(ion selective monoelectrode complex)
IT 78-93-3, Methyl ethyl ketone, uses 108-88-3, Toluene, uses
RL: NUU (Other use, unclassified); USES (Uses)
(ion selective monoelectrode complex)

L37 ANSWER 17 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:242885 HCAPLUS
DN 136:386866
TI Effect of plasticizers on the formation of silver nanoparticles in polymer electrolyte membranes for olefin/paraffin separation
AU Jose, Binoy; Ryu, Jae Hee; Kim, Yong Jin; Kim, Honggon; Kang, Yong Soo; Lee, Sang Deuk; Kim, Hoon Sik
CS CFC Alternatives Research Center and Center for Facilitated Transport Membrane, Korea Institute of Science and Technology, Seongbukgu Seoul, 136-791, S. Korea
SO Chemistry of Materials (2002), 14(5), 2134-2139
CODEN: CMATEX; ISSN: 0897-4756
PB American Chemical Society
DT Journal
LA English
AB The effect of plasticizers such as dioctyl **phthalate**, di-Ph **phthalate**, dioctyl **terephthalate**, ethylene carbonate, glycerol, and sucrose on the performance and stability of polymer electrolyte membranes consisting of AgBF4 and poly(vinylpyrrolidone) (PVP) or poly(2- ethyl-2-oxazoline) (POZ) has been investigated for the separation of propylene/propane gas mixts. The mixed gas permeance and selectivities for propylene over propane on AgBF4-PVP and AgBF4-POZ membranes without a plasticizer continuously decreased with time due to the reduction of silver ions in the membrane. Reduction of silver ions to silver nanoparticles in AgBF4-PVP membrane was confirmed by transmission electron microscopic anal. Among the plasticizers tested, the presence of dioctyl or di-Ph **phthalate** was found to improve the stability and performance of the membranes significantly. On the other hand, the performance of the membranes containing glycerol or sucrose as a plasticizer rapidly deteriorated even faster than that of the membranes without a plasticizer. Anal. of the membranes shows that the rate of silver nanoparticle formation is greatly reduced by the addition of a **phthalate**, but accelerated by the presence of glycerol.
CC 37-6 (**Plastics** Manufacture and Processing)
Section cross-reference(s): **38**
ST silver nanoparticle membrane permeability selectivity sepn propylene propane; dioctyl diphenyl **phthalate** plasticizer permselective membrane polyvinylpyrrolidone polyoxazoline prepn
IT Nanoparticles
Particle size distribution
Plasticizers
Polymer electrolytes
(effect of plasticizers on the formation of silver nanoparticles in polymer electrolyte membranes for olefin/paraffin separation)
IT Polyamines
RL: DEV (Device component use); **POF (Polymer in formulation)**; PRP (Properties); USES (Uses)
(effect of plasticizers on the formation of silver nanoparticles in polymer electrolyte membranes for olefin/paraffin separation)
IT Membranes, nonbiological
(permselective; formation of silver nanoparticles in polymer electrolyte membranes for olefin/paraffin separation)

IT Permeability
(selective; effect of plasticizers on the formation of silver nanoparticles in polymer electrolyte membranes for olefin/paraffin separation)
IT **9003-39-8**, Polyvinylpyrrolidone **25805-17-8**, Poly(2-ethyl-2-oxazoline) **69488-61-5**
RL: DEV (Device component use); **POF (Polymer in formulation)**; PRP (Properties); USES (Uses)
(effect of plasticizers on the formation of silver nanoparticles in polymer electrolyte membranes for olefin/paraffin separation)
IT **14104-20-2**, Silver tetrafluoroborate
RL: MOA (Modifier or additive use); USES (Uses)
(effect of plasticizers on the formation of silver nanoparticles in polymer electrolyte membranes for olefin/paraffin separation)
IT 56-81-5, Glycerol, uses 57-50-1, Sucrose, uses **84-62-8**, Diphenyl **phthalate** 96-49-1, Ethylene carbonate 117-81-7, Dioctyl **phthalate** 4654-26-6, Dioctyl **terephthalate**
RL: MOA (Modifier or additive use); USES (Uses)
(plasticizer; effect of plasticizers on the formation of silver nanoparticles in polymer electrolyte membranes for olefin/paraffin separation)
IT 74-98-6, Propane, processes 115-07-1, Propylene, processes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(silver nanoparticles in polymer electrolyte membranes for separation of propylene/propane gas mixts)
IT **9003-39-8**, Polyvinylpyrrolidone **25805-17-8**, Poly(2-ethyl-2-oxazoline) **69488-61-5**
RL: DEV (Device component use); **POF (Polymer in formulation)**; PRP (Properties); USES (Uses)
(effect of plasticizers on the formation of silver nanoparticles in polymer electrolyte membranes for olefin/paraffin separation)
RN 9003-39-8 HCAPLUS
CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

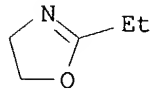
CRN 88-12-0
CMF C6 H9 N O



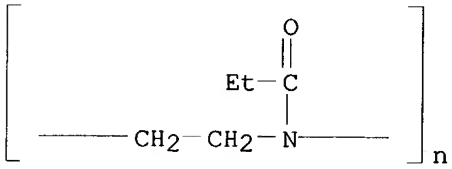
RN 25805-17-8 HCAPLUS
CN Oxazole, 2-ethyl-4,5-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

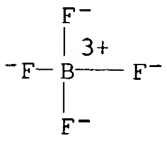
CRN 10431-98-8
CMF C5 H9 N O



RN 69488-61-5 HCAPLUS
CN Poly[[(1-oxopropyl)imino](1,2-ethanediyl)] (9CI) (CA INDEX NAME)

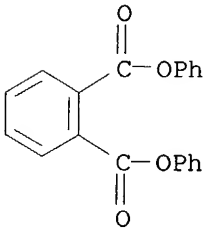


IT **14104-20-2**, Silver tetrafluoroborate
RL: MOA (Modifier or additive use); USES (Uses)
(effect of plasticizers on the formation of silver nanoparticles in polymer electrolyte membranes for olefin/paraffin separation)
RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

IT **84-62-8**, Diphenyl **phthalate**
RL: MOA (Modifier or additive use); USES (Uses)
(plasticizer; effect of plasticizers on the formation of silver nanoparticles in polymer electrolyte membranes for olefin/paraffin separation)
RN 84-62-8 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, diphenyl ester (9CI) (CA INDEX NAME)



RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 18 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:851489 HCAPLUS
DN 135:380341
TI Ion-selective solid-state **polymeric membrane** electrodes
IN Ramamurthy, Narayanan; Meyerhoff, Mark E.; Baugh, Robert P.; Larkin, Colin P.
PA Medtronic, Inc., USA; The Regents of the University of Michigan
SO PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001088520	A2	20011122	WO 2001-US16165	20010516
	WO 2001088520	A3	20021017		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1287345	A2	20030305	EP 2001-939132	20010516
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2003533694	T2	20031111	JP 2001-584865	20010516
PRAI	US 2000-573378	A	20000518		
	WO 2001-US16165	W	20010516		

AB An improved ion-sensing electrode for detecting ions or polyions is provided having an elec. conducting member sheathed or coated with a layer of insulation except at an exposed, uninsulated area, where the insulation free surface of the elec. conducting member is texturized, and a **polymeric membrane** coated on the insulation-free surface of the elec. conducting member, where the ion selective **membrane** includes an ionophore. The texturized surface improves the starting EMF stability and reproducibility of the ion-sensing electrodes, and further improves **membrane** adherence to the elec. conducting member.

IC ICM G01N027-00
CC 79-2 (Inorganic Analytical Chemistry)
Section cross-reference(s): 9, 38
ST ion selective solid state **polymeric membrane** electrode
IT Urethane rubber, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(Pellethane; ion-selective solid-state **polymeric membrane** electrodes)
IT Blood analysis
Body fluid
Buffers
Cation exchangers
Ion-selective electrodes
Ionophores
Membrane electrodes
Physiological saline solutions

Plasticizers
(ion-selective solid-state **polymeric membrane** electrodes)

IT Peptides, analysis
Protamines
RL: ANT (Analyte); ANST (Analytical study)
(ion-selective solid-state **polymeric membrane** electrodes)

IT Sulfonates
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(ion-selective solid-state **polymeric membrane** electrodes)

IT Borates
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(ion-selective solid-state **polymeric membrane** electrodes)

IT Phosphates, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(ion-selective solid-state **polymeric membrane** electrodes)

IT Polyurethanes, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(ion-selective solid-state **polymeric membrane** electrodes)

IT Quaternary ammonium compounds, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(ion-selective solid-state **polymeric membrane** electrodes)

IT Silicone rubber, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(ion-selective solid-state **polymeric membrane** electrodes)

IT Cations
(polyvalent; ion-selective solid-state **polymeric membrane** electrodes)

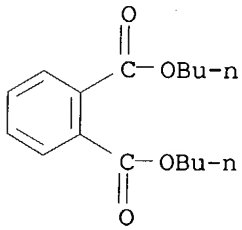
IT 9004-07-3, Chymotrypsin 9015-94-5, Renin, analysis 24937-47-1, Poly(arginine) 25104-18-1, Poly(lysine) 25212-18-4, Poly(arginine) 28728-55-4, Polybrene 38000-06-5, Poly(lysine) 62238-80-6D, quaternized
RL: ANT (Analyte); ANST (Analytical study)
(ion-selective solid-state **polymeric membrane** electrodes)

IT 57-09-0, Hexadecyltrimethylammonium bromide 64-20-0, Tetramethylammonium bromide 78-42-2, Tris(2-ethylhexyl) phosphate **84-74-2**, Dibutyl **phthalate** 103-23-1, Dioctyl adipate 103-50-4, Benzyl ether 109-43-3, Dibutyl sebacate 112-30-1, 1-Decanol 117-81-7, Dioctyl **phthalate** 122-62-3, Dioctyl sebacate 138-24-9, Trimethylphenylammonium chloride 143-66-8, Sodium tetraphenylborate 311-28-4, Tetrabutylammonium iodide 866-97-7, Tetrapentylammonium bromide 1010-19-1, Triethylphenylammonium iodide 1754-47-8, Dioctylphenyl phosphonate 2567-83-1, Tetraethylammonium perchlorate 3700-67-2, Dimethyldioctadecylammonium bromide 5137-55-3, Trioctylmethylammonium chloride 7173-54-8, Tridodecylmethylammonium

chloride 7429-90-5, Aluminum, analysis 7439-88-5, Iridium, analysis 7439-89-6, Iron, analysis 7440-02-0, Nickel, analysis 7440-05-3, Palladium, analysis 7440-06-4, Platinum, analysis 7440-22-4, **Silver**, analysis 7440-50-8, Copper, analysis 7440-57-5, Gold, analysis 9000-07-1, Carrageenan 9002-86-2, Polyvinyl chloride 9004-32-4, Carboxymethyl cellulose 9005-49-6, Heparin, analysis 9007-28-7, Chondroitin sulfate 9012-09-3, Cellulose triacetate 9041-08-1, Ardeparin sodium 9050-30-0, Heparan sulfate 10521-91-2, 5-Phenyl-1-pentanol 12597-68-1, Stainless steel, analysis 14680-77-4, Potassium tetrakis(4-chlorophenyl) borate 14866-33-2, Tetraoctylammonium bromide 15477-76-6, Phosphonate 24967-94-0, Dermatan sulfate 25190-06-1 25322-17-2 25822-51-9, Vinyl **alcohol**-vinyl chloride **copolymer** 37682-29-4, 2-Nitrophenyl octyl ether 39317-41-4 40038-00-4 40835-97-0 79060-88-1, Sodium tetrakis[3,5-bis(trifluoromethyl)phenyl]borate 105560-52-9, Potassium tetrakis[3,5-bis(trifluoromethyl)phenyl]borate 106327-92-8 121504-53-8, Tetraphenylammonium tetraphenyl borate 288574-52-7, M48 374075-01-1 374075-05-5
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(ion-selective solid-state **polymeric membrane** electrodes)

IT **84-74-2**, Dibutyl **phthalate**
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(ion-selective solid-state **polymeric membrane** electrodes)

RN 84-74-2 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



L37 ANSWER 19 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:840754 HCAPLUS
DN 135:358994
TI Electroconductive pastes containing polycarbonate-polyesters with good cold bending strength and heat resistance
IN Aoki, Takao; Kondo, Koji; Tajika, Hiroshi
PA Toyobo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001319524	A2	20011116	JP 2000-138794	20000511
PRAI	JP 2000-138794		20000511		

AB The pastes, useful for **membrane** circuits, comprise

electroconductive powders, **solvents**, and binders containing polyesters with Mn ≥3000, wherein the polyesters comprise aliphatic glycols having C≥5-main chains and/or alicyclic glycols, 5-80 weight% aliphatic polycarbonate diols, and acid components containing ≥70 mol% aromatic dicarboxylic acids. Thus, a paste containing **Ag** and di-Me **isophthalate**-dimethyl **terephthalate**-HDI biuret-1,5-pentanediol-poly(hexamethylene carbonate) **copolymer** was applied on a PET film to give a test piece.

IC ICM H01B001-22
ICS C08K003-00; C08K005-00; C08L067-00; H01B001-24

CC 38-3 (**Plastics** Fabrication and Uses)
Section cross-reference(s): 76

ST electroconductive paste polyester polycarbonate flexible circuit; cold bending strength electroconductive paste polyester

IT Carbon black, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(Ketjenblack; electroconductive pastes containing polycarbonate-polyesters with good cold bending strength and heat resistance)

IT Binders
Electrically conductive pastes
(electroconductive pastes containing polycarbonate-polyesters with good cold bending strength and heat resistance)

IT Printed circuit boards
(flexible; electroconductive pastes containing polycarbonate-polyesters with good cold bending strength and heat resistance)

IT Polyesters, uses
RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polycarbonate-, binder; electroconductive pastes containing polycarbonate-polyesters with good cold bending strength and heat resistance)

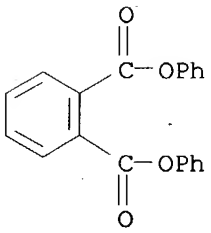
IT Polycarbonates, uses
RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyester-, binder; electroconductive pastes containing polycarbonate-polyesters with good cold bending strength and heat resistance)

IT 208725-73-9P 373378-30-4P 373378-31-5P 373378-32-6P
RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(binder; electroconductive pastes containing polycarbonate-polyesters with good cold bending strength and heat resistance)

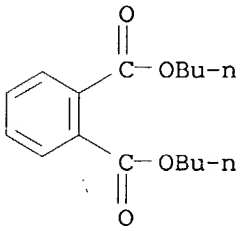
IT 7440-22-4, **Silver**, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(electroconductive pastes containing polycarbonate-polyesters with good cold bending strength and heat resistance)

L37 ANSWER 20 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:751971 HCAPLUS
DN 136:86757
TI Effect of **phthalates** on the stability and performance of AgBF4-PVP membranes for olefin/paraffin separation
AU Jose, Binoy; Ryu, Jae Hee; Lee, Byung Gwon; Lee, Hyunjoo; Kang, Yong Soo; Kim, Hoon Sik
CS CFC Alternatives Research Center, Korea Institute of Science and Technology, Seongbukgu, Seoul, 136-791, S. Korea
SO Chemical Communications (Cambridge, United Kingdom) (2001), (20),

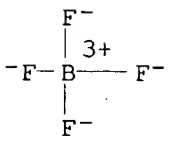
2046-2047
CODEN: CHCOFS; ISSN: 1359-7345
PB Royal Society of Chemistry
DT Journal
LA English
AB The presence of **phthalate** plasticizers in dry polymer membranes consisting of poly(N-vinylpyrrolidone) (PVP) and AgBF4 provides long-term stability and better performance for the separation of propylene/propane gas mixts.
CC 38-3 (**Plastics** Fabrication and Uses)
Section cross-reference(s): **35**
ST **phthalate** plasticized polyvinylpyrrolidone membrane propylene propane sepn
IT Membranes, nonbiological
Plasticizers
(effect of **phthalate** plasticizers on performance of AgBF4-containing poly(vinylpyrrolidone) membranes for propane/propylene mixture separation)
IT **84-62-8**, Diphenyl **phthalate** **84-74-2**, Dibutyl **phthalate** 117-81-7, DOP
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(effect of **phthalate** plasticizers on performance of AgBF4-containing poly(vinylpyrrolidone) membranes for propane/propylene mixture separation)
IT **14104-20-2**, Silver tetrafluoroborate
RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(effect of **phthalate** plasticizers on performance of AgBF4-containing poly(vinylpyrrolidone) membranes for propane/propylene mixture separation)
IT 115-07-1P, Propylene, processes
RL: PEP (Physical, engineering or chemical process); PUR (Purification or recovery); PYP (Physical process); PREP (Preparation); PROC (Process)
(effect of **phthalate** plasticizers on performance of AgBF4-containing poly(vinylpyrrolidone) membranes for propane/propylene mixture separation)
IT 74-98-6, Propane, processes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); REM (Removal or disposal); PROC (Process)
(effect of **phthalate** plasticizers on performance of AgBF4-containing poly(vinylpyrrolidone) membranes for propane/propylene mixture separation)
IT **9003-39-8**, Poly(N-vinylpyrrolidone)
RL: **POF (Polymer in formulation)**; PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(effect of **phthalate** plasticizers on performance of AgBF4-containing poly(vinylpyrrolidone) membranes for propane/propylene mixture separation)
IT **84-62-8**, Diphenyl **phthalate** **84-74-2**, Dibutyl **phthalate**
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(effect of **phthalate** plasticizers on performance of AgBF4-containing poly(vinylpyrrolidone) membranes for propane/propylene mixture separation)
RN 84-62-8 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, diphenyl ester (9CI) (CA INDEX NAME)



RN 84-74-2 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



IT **14104-20-2**, Silver tetrafluoroborate
RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(effect of **phthalate** plasticizers on performance of AgBF4-containing poly(vinylpyrrolidone) membranes for propane/propylene mixture separation)
RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



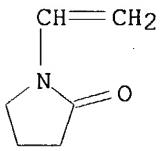
● Ag(I) +

IT **9003-39-8**, Poly(N-vinylpyrrolidone)
RL: **POF (Polymer in formulation)**; PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(effect of **phthalate** plasticizers on performance of AgBF4-containing poly(vinylpyrrolidone) membranes for propane/propylene mixture separation)
RN 9003-39-8 HCAPLUS
CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0

CMF C6 H9 N O



RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 21 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:661712 HCAPLUS
DN 135:223737
TI Electrode device with a solid state reference system of sodium vanadium bronze
IN Sorensen, Poul Ravn; Zachau-christiansen, Birgit
PA Radiometer Medical A/s, Den.
SO PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001065247	A1	20010907	WO 2001-DK139	20010301
	W: JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	EP 1269172	A1	20030102	EP 2001-909570	20010301
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
	JP 2003525450	T2	20030826	JP 2001-563894	20010301
	US 2004163949	A1	20040826	US 2002-233819	20020829
	US 6805781	B2	20041019		
PRAI	DK 2000-327	A	20000301		
	WO 2001-DK139	W	20010301		

AB The invention concerns an electrode device comprising an ion selective material, a solid state, inner reference system of sodium vanadium bronze and a contact material, where sodium may be reversibly intercalated in the bronze. Such an electrode device may for instance be sensitive to ions, such as H+, Na+, K+, and Ca2+. It may also include a reactive material in which a particular analyte is reacted to form an ion product, to which the ion selective material is sensitive, such as in electrode devices of the Severinghaus-type or in biosensors. The electrode device according to the invention can be prepared by thick film printing.
IC ICM G01N027-327
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 72, 79
ST electrode device solid state ref system; sodium vanadium bronze ref system electrode; ion sensitive electrode sensor; biosensor electrode solid state ref
IT Ion-selective electrodes
(ammonium-selective; electrode device with solid state reference system of sodium vanadium bronze)
IT Gases
(barrier permeable to; electrode device with solid state reference system of

sodium vanadium bronze)
IT Ion-selective electrodes
(cadmium-selective; electrode device with solid state reference system of sodium vanadium bronze)
IT Binders
Blood analysis
Electrodes
Electrolytes
Electronic device fabrication
Enzyme electrodes
Ion-selective electrodes
Ions
Reference electrodes
pH
(electrode device with solid state reference system of sodium vanadium bronze)
IT Enzymes, uses
Reagents
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(electrode device with solid state reference system of sodium vanadium bronze)
IT Polyamides, uses
Polyesters, uses
Polyoxyalkylenes, uses
RL: DEV (Device component use); USES (Uses)
(electrode device with solid state reference system of sodium vanadium bronze)
IT **Polymers**, reactions
RL: DEV (Device component use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(electrode device with solid state reference system of sodium vanadium bronze)
IT Metals, uses
Noble metals
RL: DEV (Device component use); USES (Uses)
(for contact material; electrode device with solid state reference system of sodium vanadium bronze)
IT Ion-selective electrodes
(hydrogen-selective; electrode device with solid state reference system of sodium vanadium bronze)
IT Epoxides
Polycarbonates, reactions
Polyesters, reactions
Polysiloxanes, reactions
Polyurethanes, reactions
RL: DEV (Device component use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(in binders; electrode device with solid state reference system of sodium vanadium bronze)
IT Ionophores
(in **polymer membrane** for ion-selective material; electrode device with solid state reference system of sodium vanadium bronze)
IT **Membranes**, nonbiological
(ionophore-containing **polymer**; electrode device with solid state reference system of sodium vanadium bronze)
IT Ion-selective electrodes
(lead-selective; electrode device with solid state reference system of

sodium vanadium bronze)
IT Ion-selective electrodes
(lithium-selective electrodes; electrode device with solid state reference system of sodium vanadium bronze)
IT Ion-selective electrodes
(magnesium-selective; electrode device with solid state reference system of sodium vanadium bronze)
IT Ion-selective electrodes
(nickel-selective; electrode device with solid state reference system of sodium vanadium bronze)
IT Electrodes
(planar; electrode device with solid state reference system of sodium vanadium bronze)
IT Kaolin, uses
RL: DEV (Device component use); USES (Uses)
(silanized; electrode device with solid state reference system of sodium vanadium bronze)
IT Ion-selective electrodes
(**silver**-selective; electrode device with solid state reference system of sodium vanadium bronze)
IT Ion-selective electrodes
(sodium-selective; electrode device with solid state reference system of sodium vanadium bronze)
IT Ceramics
(**supports**; electrode device with solid state reference system of sodium vanadium bronze)
IT Printing (nonimpact)
(thick-film; electrode device with solid state reference system of sodium vanadium bronze)
IT Ion-selective electrodes
(urea-selective, enzyme; electrode device with solid state reference system of sodium vanadium bronze)
IT Enzyme electrodes
(urea-selective; electrode device with solid state reference system of sodium vanadium bronze)
IT 57-13-6, Urea, analysis 7664-41-7, Ammonia, analysis 12408-02-5, Hydrogen ion, analysis 14127-61-8, Calcium ion, analysis 14280-50-3, Pb2+, analysis 14701-21-4, **Silver** ion, analysis 14701-22-5, analysis 14798-03-9, Ammonium ion, analysis 17341-24-1, analysis 17341-25-2, Sodium ion, analysis 18459-37-5, Cesium ion, analysis 22537-38-8, Rubidium ion, analysis 22537-39-9, Strontium ion, analysis 22537-48-0, Cadmium ion, analysis 22541-12-4, Barium ion, analysis 22541-53-3, analysis 24203-36-9, Potassium ion, analysis
RL: ANT (Analyte); ANST (Analytical study)
(electrode device with solid state reference system of sodium vanadium bronze)
IT 124-38-9, Carbon dioxide, analysis
RL: ANT (Analyte); ARU (Analytical role, unclassified); ANST (Analytical study)
(electrode device with solid state reference system of sodium vanadium bronze)
IT 9002-13-5, Urease
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(electrode device with solid state reference system of sodium vanadium bronze)
IT 7782-44-7, Oxygen, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(electrode device with solid state reference system of sodium vanadium

bronze)

IT 57-50-1, Sucrose, uses 112-15-2, Carbitol acetate 144-55-8, Sodium hydrogen carbonate, uses 1344-28-1, Aluminum oxide, uses 2487-90-3, Trimethoxysilane 7447-40-7, Potassium chloride, uses 7783-90-6, **Silver** chloride, uses 9003-39-8, Polyvinylpyrrolidone 9011-14-7, Polymethylmethacrylate 15802-18-3 25038-59-9, Polyethylene **terephthalate**, uses 25322-68-3, Polyethylene glycol 107253-34-9, Sodium vanadium oxide (Na0.33V2O5)
RL: DEV (Device component use); USES (Uses)
(electrode device with solid state reference system of sodium vanadium bronze)

IT 7439-88-5, Iridium, uses 7440-05-3, Palladium, uses 7440-06-4, Platinum, uses 7440-16-6, Rhodium, uses 7440-57-5, Gold, uses
RL: DEV (Device component use); USES (Uses)
(for contact material; electrode device with solid state reference system of sodium vanadium bronze)

IT 9002-81-7, Polyoxymethylene 9002-86-2, Polyvinyl chloride 9003-01-4, Polyacrylic acid 9003-18-3, Butadiene acrylonitrile **copolymer** 9003-53-6, Polystyrene 9004-34-6, Cellulose, reactions 9004-34-6D, Cellulose, derivs., reactions 9004-35-7, Cellulose acetate 9004-57-3, Ethyl cellulose 9005-18-9, Propyl cellulose 25087-26-7, Polymethacrylic acid
RL: DEV (Device component use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(in binders; electrode device with solid state reference system of sodium vanadium bronze)

IT 6833-84-7, Nonactin
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(in **preparation** of ammonium ion-selective **membrane**; electrode device with solid state reference system of sodium vanadium bronze)

IT 117-81-7, **Dioctylphthalate** 14680-77-4, Potassium-tetra-p-chlorophenylborate 58801-34-6, ETH1001
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(in **preparation** of calcium ion-selective **membrane**; electrode device with solid state reference system of sodium vanadium bronze)

IT 108-94-1, Cyclohexanone, uses **109-99-9**, Tetrahydrofuran, uses
RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses)
(in **preparation** of calcium ion-selective **membrane**; electrode device with solid state reference system of sodium vanadium bronze)

IT 3586-60-5, TDDA
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(in **preparation** of hydrogen ion-selective **membrane**; electrode device with solid state reference system of sodium vanadium bronze)

IT 103-23-1, Dioctyl adipate 2001-95-8, Valinomycin
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(in **preparation** of potassium ion-selective **membrane**; electrode device with solid state reference system of sodium vanadium bronze)

IT 97600-39-0
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)

(in **preparation** of sodium ion-selective **membrane**; electrode device with solid state reference system of sodium vanadium bronze)

IT 7631-86-9, Silica, uses
RL: DEV (Device component use); USES (Uses)
(pyrogenic; electrode device with solid state reference system of sodium vanadium bronze)

IT 12597-70-5, Bronze
RL: DEV (Device component use); USES (Uses)
(sodium vanadium; electrode device with solid state reference system of sodium vanadium bronze)

IT **109-99-9**, Tetrahydrofuran, uses
RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses)
(in **preparation** of calcium ion-selective **membrane**; electrode device with solid state reference system of sodium vanadium bronze)

RN 109-99-9 HCAPLUS
CN Furan, tetrahydro- (7CI, 8CI, 9CI) (CA INDEX NAME)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 22 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:252450 HCAPLUS
DN 135:55045
TI Studies of difurylmethane-maleic anhydride **copolymer** as an ion-responsive **membrane** for the determination of mono-, di- and tri-valent cations
AU Ngila, J. Catherine; Ddamba, Wilfred A. A.
CS Chemistry Department, University of Botswana, Gaborone, Botswana
SO Macromolecular Symposia (2001), 165(Developments in Polymer Synthesis and Characterization), 73-81
CODEN: MSYMEC; ISSN: 1022-1360
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
AB The synthesis of the difurylmethane-maleic anhydride (DFM-MAH) **copolymer** was done by reacting difurylmethane with maleic acid followed by hydrolysis with sodium hydroxide to produce the anhydride sodium salt. Construction of a sensor with the **copolymer** as the ion-exchanger material was done by mixing the **copolymer** with poly(vinyl chloride), PVC, plastic matrix and di-Bu **phthalate** (DBP) plasticizer in **THF solvent** to form a paste. The paste was coated on a piece of **silver** wire to produce a coated wire electrode (CWE). The response characteristics of the **copolymer**-CWE, in potentiometric anal., were studied for mono-, di- and tri-valent cations. All the cations studied showed a near-Nernstian response for concns. ranging from 5 + 10-8 M to 1 + 100M in triethanolamine buffer in aqueous media (0.5 M, pH 10.5). The **membrane** had a composition of 20:20:60 for the **copolymer**, PVC and DBP.
CC 79-2 (Inorganic Analytical Chemistry)
Section cross-reference(s): **38**

ST difurylmethane maleic anhydride **copolymer** ion responsive **membrane** detn cation

IT Ion-selective electrodes
(coated-wire; mono-, di- and tri-valent cations determination in solution by potentiometric sensor based on difurylmethane-maleic anhydride **copolymer** as ion responsive **membrane**)

IT Cations
Ion exchangers
Potentiometry
(mono-, di- and tri-valent cations determination in solution by potentiometric sensor based on difurylmethane-maleic anhydride **copolymer** as ion responsive **membrane**)

IT Sensors
(potentiometric; mono-, di- and tri-valent cations determination in solution by potentiometric sensor based on difurylmethane-maleic anhydride **copolymer** as ion responsive **membrane**)

IT 7429-90-5, Aluminum, analysis 7439-89-6, Iron, analysis 7439-92-1, Lead, analysis 7439-93-2, Lithium, analysis 7440-09-7, Potassium, analysis 7440-23-5, Sodium, analysis 7440-39-3, Barium, analysis 7440-46-2, Cesium, analysis 7440-70-2, Calcium, analysis 14798-03-9, Ammonium, analysis
RL: ANT (Analyte); ANST (Analytical study)
(mono-, di- and tri-valent cations determination in solution by potentiometric sensor based on difurylmethane-maleic anhydride **copolymer** as ion responsive **membrane**)

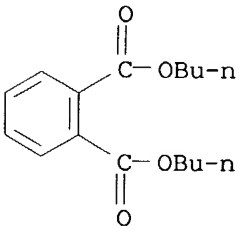
IT 7440-22-4, **Silver**, analysis
RL: ANT (Analyte); ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(mono-, di- and tri-valent cations determination in solution by potentiometric sensor based on difurylmethane-maleic anhydride **copolymer** as ion responsive **membrane**)

IT 344958-15-2P
RL: ARG (Analytical reagent use); DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); ANST (Analytical study); PREP (Preparation); USES (Uses)
(mono-, di- and tri-valent cations determination in solution by potentiometric sensor based on difurylmethane-maleic anhydride **copolymer** as ion responsive **membrane**)

IT **84-74-2**, Dibutyl **phthalate** 9002-86-2, Polyvinyl chloride
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(mono-, di- and tri-valent cations determination in solution by potentiometric sensor based on difurylmethane-maleic anhydride **copolymer** as ion responsive **membrane**)

IT 344958-14-1P
RL: ARU (Analytical role, unclassified); PNU (Preparation, unclassified); RCT (Reactant); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent)
(mono-, di- and tri-valent cations determination in solution by potentiometric sensor based on difurylmethane-maleic anhydride **copolymer** as ion responsive **membrane**)

IT **84-74-2**, Dibutyl **phthalate**
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(mono-, di- and tri-valent cations determination in solution by potentiometric
sensor based on difurylmethane-maleic anhydride **copolymer** as ion responsive **membrane**)
RN 84-74-2 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 23 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:50443 HCAPLUS
DN 134:105653
TI Sunscreens containing UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing the natural skin barrier
IN Muller, Rainer Helmut; Wissing, Sylvia; Mader, Karsten
PA Pharmasol G.m.b.H., Germany
SO PCT Int. Appl., 55 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001003652	A2	20010118	WO 2000-EP6534	20000710
	WO 2001003652	A3	20010712		
	WO 2001003652	C2	20020912		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	DE 10016155	A1	20010118	DE 2000-10016155	20000331
	BR 2000012445	A	20020402	BR 2000-12445	20000710
	EP 1194111	A2	20020410	EP 2000-951366	20000710
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2003504318	T2	20030204	JP 2001-508936	20000710
	ZA 2002000256	A	20020711	ZA 2002-256	20020111
PRAI	DE 1999-19932156	A	19990713		

DE 2000-10016155 A 20000331
WO 2000-EP6534 W 20000710

AB The invention concerns sunscreens, i.e. UV radiation reflecting or absorbing agents, designed to be applied on the skin, the mucous **membranes**, the scalp and the hair for protection against harmful UV radiation and to reinforce the natural skin barrier. The inventive agents comprise polymorphous, crystalline or semicryst. solid **polymeric** or lipidic particles. Tthus, a UV blocking lipid emulsion was produced by high-pressure homogenization of 10 weight/weight% cetyl palmitate and Tego Care 450.

IC ICM A61K007-00

CC 62-4 (Essential Oils and Cosmetics)

ST sunscreen compn UV radiation skin

IT Onium compounds
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(1-(carboxymethyl)-4,5-dihydro-1-(2-hydroxyethyl)-2-norcoco alkyl imidazolium, hydroxides, sodium salts; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT **Alcohols**, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(C16-18, reaction with sulfuric acid, sodium salts; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Glycerides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(C8-10; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Beeswax
Differential scanning calorimetry
Disperse systems
Hair
Milling (size reduction)
Mucous **membrane**
Particle size
Perfumes
Repellents
Scalp
Skin
Sunscreens
Surfactants
UV radiation
(UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Bentonite, biological studies
Carbon black, biological studies
Carnauba wax
Coconut oil
Collagens, biological studies
Cottonseed oil
Elastins
Essential oils
Flavonoids
Glycoproteins, general, biological studies

Jojoba oil
Kaolin, biological studies
Keratins
Lecithins
Linseed oil
Lipids, biological studies
Melanins
Mucopolysaccharides, biological studies
Olive oil
Palm oil
Peanut oil
Polyamides, biological studies
Polycarbonates, biological studies
Polyesters, biological studies
Polymers, biological studies
Polyurethanes, biological studies
Safflower oil
Tocopherols
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Fats and Glyceridic oils, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(animal; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(anise; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Fats and Glyceridic oils, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(avocado; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(bergamot; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(cinnamon; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(clove; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Cosmetics
(creams; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
IT **Polymer** morphology
(crystalline; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(eucalyptus; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
IT Fats and Glyceridic oils, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(fish; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
IT Diglycerides
Glycerides, biological studies
Monoglycerides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(hydrogenated coco monoglycerides, diglycerides and triglycerides, Witepsol; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(jasmine; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(lavender; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(lemon; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
IT Cosmetics
(lipsticks; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
IT Cosmetics
(lotions; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(mandarin orange; UV radiation reflecting or absorbing agents,

protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Proteins, general, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(milk; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(mint, Mentha; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(peppermint; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(rose; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(rosemary; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(sandalwood; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Fats and Glyceridic oils, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(sesame; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Cosmetics
(sprays; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Fats and Glyceridic oils, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(walnut; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT Fats and Glyceridic oils, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(wheat germ; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as

sunscreens)

IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ylang-ylang; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

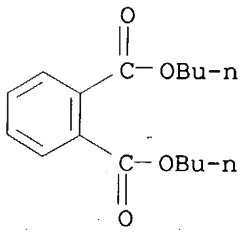
IT 36574-66-0D, N-coco acyl derivs.
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(Cocoamidopropylbetaine; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)

IT 50-81-7, Vitamin C, biological studies 50-99-7, D-Glucose, biological studies 51-17-2D, Benzimidazole, derivs. 52-90-4, L-Cysteine, biological studies 56-81-5, Glycerol, biological studies 56-86-0, L-Glutamic acid, biological studies 57-13-6, Urea, biological studies 57-55-6, Propylene glycol, biological studies 57-88-5, Cholesterol, biological studies 58-85-5, Biotin 58-95-7, Vitamin E-Acetate 60-33-3, Linolic acid, biological studies 68-26-8, Retinol 72-17-3, Sodiumlactate 79-81-2, Retinolpalmitate 80-56-8, α-Pinene 81-13-0, Panthenol **84-74-2, Dibutylphthalate** 89-78-1, Menthol 94-25-7, Butyl-p-Aminobenzoate 94-96-2 97-53-0, Eugenol 97-59-6, Allantoin 98-92-0, Niacinamide 110-27-0, Isopropylmyristate 118-56-9, Homosalate 118-60-5, 2-Ethylhexylsalicylate 119-61-9, Benzophenone, biological studies 120-46-7, Dibenzoylmethane 121-79-9, Propylgallate 123-28-4, Dilaurylthiodipropionate 127-47-9, Retinol acetate 128-37-0, biological studies **131-11-3, Dimethylphthalate** 131-54-4, 2,2'-Dihydroxy-4,4'-dimethoxybenzophenone 131-57-7, 2-Hydroxy-4-methoxybenzophenone 136-44-7, Glycerol-p-Aminobenzoate 138-86-3, Limonen 150-13-0, p-Aminobenzoic acid 331-39-5, Caffeic acid 463-40-1, Linolenic acid 470-82-6, 1,8-Cineol 471-34-1, Calcium-carbonate, biological studies 515-69-5, Bisabolol 538-24-9, Glyceroltrilaurate 540-10-3, Cetylpalmitate 557-05-1, Zinc stearate 1077-28-7, α-Liponic acid 1166-52-5, Dodecylgallate 1309-37-1, Iron-(III)oxide, biological studies 1309-48-4, Magnesiumoxide, biological studies 1314-13-2, Zinc oxide, biological studies 1317-38-0, Copperoxide, biological studies 1323-38-2, Glyceryl ricinoleate 1406-18-4, Vitamin E 1406-18-4D, Vitamin E, conjugate with Polyethylene succinate 1843-05-6, 2-Hydroxy-4-octyloxybenzophenone 2128-93-0, 4-Phenylbenzophenone 2451-01-6, Terpinhydrate 4065-45-6, Sulisobenzone 4810-56-4 5466-77-3, p-Methoxycinnamic acid-2-ethylhexylester 6805-41-0, Aescin 7440-22-4, **Silver**, biological studies 7631-86-9, Silica, biological studies 7664-93-9D, Sulfuric acid, mixed cetyl-stearyl esters, sodium salts, biological studies 7727-43-7, Bariumsulfate 7757-87-1 7778-18-9, Calciumsulfate 7787-59-9, Bismuth oxychloride 8067-32-1, Glycerolpalmitostearate 9000-69-5, Pectins 9002-89-5, Polyvinylalcohol 9003-01-4, Polyacrylic acid 9003-20-7, Polyvinylacetate 9003-39-8, Polyvinylpyrrolidone 9003-53-6, Polystyrene 9004-61-9, Hyaluronic acid 9005-65-6, Tween 80 11100-07-5, Ironoxide hydrate 13463-67-7, Titanium dioxide, biological studies 14807-96-6, Talcum, biological studies 15431-40-0, Magnesiumascorbate 18641-57-1, Glyceryltribehenate 25013-16-5 25087-26-7, Polymethacrylic acid 25168-73-4, Saccharosestearate 25339-99-5, Saccharoselaurate 25569-53-3D, Polyethylene succinate, conjugate with Vitamin E 25667-11-2D, Polyethylene succinate, conjugate with Vitamin E 26266-58-0, Span 85 26446-38-8, Saccharose monopalmitate 26545-51-7, N,N-Diethyltoluamide 26680-10-4, Polylactide

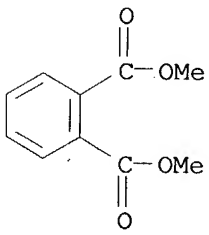
27195-16-0, Saccharosedistearate 27216-47-3, Saccharose monomyristate
27503-81-7, 2-Phenylbenzimidazole-5-sulfonic acid 28874-51-3
31566-31-1, Glycerolmonostearate 34562-29-3, α-Tocopherol-
Palmitate 36148-84-2, Vitamin E-Linoleate 36861-47-9,
3-(4-Methylbenzylidene)camphor 42922-74-7, α-D-Glucopyranoside,
β-D-fructofuranosyl, monooctanoate 43119-47-7, Vitamin E-Nicotinate
52352-27-9, Polyhydroxybutyric acid 57093-19-3, Pyroglutamyl-L-arginine
58817-05-3, Octyldimethyl-p-Aminobenzoate 60842-32-2, Aerosil R972
63250-25-9, 4-Isopropyldibenzoylmethane 64296-33-9, Vitamin C-Palmitate
68141-12-8, Propyl p-Methoxycinnamate 70356-09-1, 4-tert-Butyl-4'-
methoxydibenzoylmethane 71617-10-2, Isoamyl p-methoxycinnamate
77466-09-2, Miglyol 840 88122-99-0, Octyltriazone 92761-26-7,
Terephthalylidene-3,3'-dicamphor-10,10'-disulfonic acid 106392-12-5,
Poloxamer 188 155633-54-8 157175-98-9, Tego Care 450 187339-62-4,
Polyglycerolmethylglucosedistearate
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(UV radiation reflecting or absorbing agents, protecting against
harmful UV radiation and reinforcing natural skin barrier as
sunscreens)

IT **84-74-2, Dibutylphthalate 131-11-3,**
Dimethylphthalate
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(UV radiation reflecting or absorbing agents, protecting against
harmful UV radiation and reinforcing natural skin barrier as
sunscreens)

RN 84-74-2 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



RN 131-11-3 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dimethyl ester (9CI) (CA INDEX NAME)



L37 ANSWER 24 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:900552 HCAPLUS
DN 134:73508

TI Synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solutions

IN Bruening, Ronald L.; Krakowiak, Krzysztof E.; Dileo, Anthony J.; Parekh, Bipin S.

PA IBC Advanced Technologies, Inc., USA; Millipore Corp.

SO PCT Int. Appl., 38 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000076760	A1	20001221	WO 2000-US16110	20000609
	W: JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6221476	B1	20010424	US 1999-330543	19990611
	EP 1202857	A1	20020508	EP 2000-941367	20000609
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	JP 2003502133	T2	20030121	JP 2001-503248	20000609
PRAI	US 1999-330543	A	19990611		
	WO 2000-US16110	W	20000609		

OS MARPAT 134:73508

AB Chelating agents for selective binding of metal ions from a solution are **membrane**-bound hydroxypyridinone-containing ligands that are bound to a **membrane** with a hydrophilic surface, with a general formula M-A-L-(HOPO)n, in which M is the **membrane**, A is a covalent linkage, L is the ligand carrier, and HOPO is the hydroxypyridinone appropriately spaced on the ligand carrier to provide a min. of 6 functional coordination metal binding sites, and n = 3-6. The HOPO structures are derived from 3-hydroxy-2(1H)-pyridinone, 1-hydroxy-2(1H)-pyridinone, and 3-hydroxy-4(1H)-pyridinone. The covalent linkage selected from amide, ester, thioester, carbonyl, ether, thioether, sulfonate, and sulfonamide groups. Suitable **membranes** (M) can be hydrophilic (e.g., polyamides, cellulose, regenerated cellulose, cellulose acetate, nitrocellulose) or composite **membranes** (e.g., PTFE, PVDF, polyethylene, polypropylene, poly(methylpentene), polystyrene, polysulfones, polyethersulfones, polyethylene **terephthalate**, poly(butylene **terephthalate**), polyacrylates, polycarbonates, poly(vinyl chloride), and polyacrylonitrile). The chelating agents are active in removing metal ions from neutral to slightly acidic solns. (especially Cu2+, Al3+, Ga3+, Ni2+, Zn2+, Cd2+, **Ag**+, and Hg2+), in removing Pu4+, Th4+, Zr4+, and Hf4+ ions from aqueous HNO3, and removing Fe(3+) from dilute (1-5%) HF and NH4+ solns.

IC ICM B32B003-26
ICS B01D011-00; B01D063-00

CC 48-1 (Unit Operations and Processes)
Section cross-reference(s): 28, **38**, 61, 71

ST chelating agent **membrane supported** agent; metal chelation **membrane supported** reagent; transition metal chelation **membrane supported** reagent; actinide chelation **membrane supported** reagent; lanthanide chelation **membrane supported** reagent; hydroxypyridinone **membrane supported** ligand metal chelation

IT Actinides

Rare earth metals, processes
Transition metals, processes
RL: RCT (Reactant); REM (Removal or disposal); PROC (Process); RACT (Reactant or reagent)
(ions, chelation and removal of; synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT Polysulfones, reactions
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(polyether-, reaction products, **membranes, polymer**-bound chelating agents; synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT **Membranes**, nonbiological
(**polymeric**; synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT Polyethers, reactions
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(polysulfone-, reaction products, **membranes, polymer**-bound chelating agents; synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT **Fluoropolymers**, reactions
Polyesters, reactions
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(reaction products with hydroxypyridinone-containing reagents, **membranes, polymer**-bound chelating agents; synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT Polyamides, reactions
Polycarbonates, reactions
Polysulfones, reactions
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(reaction products, **membranes, polymer**-bound chelating agents; synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT Chelating agents
Polymer-supported reagents
Sequestering agents
(synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT 14280-50-3, Lead ion(2+), processes 14302-87-5, processes 14701-21-4, **Silver** ion(1+), processes 14701-22-5, Nickel ion(2+), processes 15158-11-9, Copper ion(2+), processes 15543-40-5, Zirconium ion(4+), processes 16065-92-2, Thorium ion(4+), processes 20074-52-6, Ferric ion, processes 22537-23-1, processes 22537-33-3, Gallium ion(3+), processes 22537-48-0, processes 22541-25-9, Hafnium ion(4+), processes 22541-44-2, Plutonium ion(4+), processes 23713-49-7, Zinc ion(2+), processes
RL: RCT (Reactant); REM (Removal or disposal); PROC (Process); RACT (Reactant or reagent)
(chelation and removal of; synthesis and use of **polymeric**

membrane-supported hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT 822-89-9, 1-Hydroxy-2(1H)-pyridinone 1121-23-9, 3-Hydroxy-4(1H)-pyridinone 16867-04-2, 3-Hydroxy-2(1H)-pyridinone 94781-89-2D, 2-Pyridinecarboxylic acid, 1,6-dihydro-1-hydroxy-6-oxo-, reaction products with coupling agents and **polymeric** hydrophilic **membrane** surfaces
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(**membrane-supported** ligands; synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT 9002-84-0D, Polytetrafluoroethylene, reaction products with hydroxypyridinone-containing reagents 9002-86-2D, Polyvinyl chloride, reaction products with hydroxypyridinone-containing reagents 9002-88-4D, Polyethylene, reaction products with hydroxypyridinone-containing reagents 9003-01-4D, Poly(acrylic acid), reaction products with hydroxypyridinone-containing reagents 9003-07-0D, Polypropylene, reaction products with hydroxypyridinone-containing reagents 9003-53-6D, Polystyrene, reaction products with hydroxypyridinone-containing reagents 9003-70-7D, Divinylbenzene-styrene **copolymer**, reaction products with hydroxypyridinone-containing reagents 9004-34-6D, Cellulose, reaction products with hydroxypyridinone-containing reagents, reactions 9004-35-7D, Cellulose acetate, reaction products with hydroxypyridinone-containing reagents 9004-70-0D, Nitrocellulose, reaction products with hydroxypyridinone-containing reagents 24937-79-9D, Poly(vinylidene difluoride, reaction products with hydroxypyridinone-containing reagents 24968-12-5D, Polybutylene **terephthalate**, reaction products with hydroxypyridinone-containing reagents 25014-41-9D, Polyacrylonitrile, reaction products with hydroxypyridinone-containing reagents 25038-59-9D, Polyethylene **terephthalate**, reaction products with hydroxypyridinone-containing reagents 25068-26-2D, Poly(4-methyl-1-pentene), reaction products with hydroxypyridinone-containing reagents 26062-94-2D, Polybutylene **terephthalate**, reaction products with hydroxypyridinone-containing reagents
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(**membranes, polymer**-bound chelating agents; synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT 74568-07-3, Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-25,26,27,28-tetrol
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction and cyanoalkylation of; in synthesis of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT 314256-73-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and cyanoalkylation of; in synthesis of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT 2465-91-0P, Propanenitrile, 3,3'-[[2,2-bis[(2-cyanoethoxy)methyl]-1,3-propanediyl]bis(oxy)]bis- 314256-74-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and hydrogenation of; in synthesis of **polymeric**

membrane-supported hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT 5045-94-3P, 1-Propanamine, 3,3'-[[2,2-bis[(3-aminopropoxy)methyl]-1,3-propanediyl]bis(oxy)]bis- 314256-75-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and reaction of; in synthesis of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT 4742-00-1P, 1,3-Propanediamine, 2,2-bis(aminomethyl)-
RL: NUU (Other use, unclassified); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(synthesis of and N-hydroxyoxypyridinecarboxylic acid reaction with; in synthesis of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT 314254-85-8DP, reaction products with coupling agents and activated **polymers** 314254-86-9DP, reaction products with coupling agents and activated **polymers** 314254-87-0DP, reaction products with coupling agents and activated **polymers** 314254-88-1DP, reaction products with coupling agents and activated **polymers** 314256-76-3DP, reaction products with coupling agents and activated **polymers**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of, **polymer**-bound chelating agents; synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 25 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:609047 HCAPLUS
DN 133:180395
TI Solid gel **membrane**
IN Chen, Muguo; Tsai, Tsepin; Yao, Wayne; Chang, Yuen-ming; Li, Lin-feng; Tom, Karen
PA Reveo, Inc., USA
SO PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000051198	A2	20000831	WO 2000-US4881	20000225
	WO 2000051198	A3	20010111		
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 2003099872	A1	20030529	US 1999-259068	19990226
	US 6605391	B2	20030812		
	US 6358651	B1	20020319	US 2000-482126	20000111
	EP 1155467	A2	20011121	EP 2000-913617	20000225

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

	BR 2000008506	A	20020205	BR 2000-8506	20000225
	JP 2002538585	T2	20021112	JP 2000-601703	20000225
	AU 772935	B2	20040513	AU 2000-35030	20000225
PRAI	US 1999-259068	A	19990226		
	US 2000-482126	A	20000111		
	WO 2000-US4881	W	20000225		

AB A highly conductive **polymer** based solid gel **membrane** is especially well-suited for use in such electrochem. devices as metal/air, Zn/MnO2, Ni/Cd batteries and hydrogen fuel cells, as well as in electrochromic devices such as smart windows and flat panel displays. Furthermore, in rechargeable electrochem. cells, the solid gel **membrane** is highly-effective for use as a separator between the anode and charging electrode. In accordance with the principles of the invention, the highly conductive **membrane** comprises a **support** or **substrate** and a **polymeric** gel composition having an ionic species contained in a solution phase thereof. The **polymer**-based gel is prepared by adding an ionic species to a monomer solution followed by **polymerization** After **polymerization**, the ionic species is embedded in the **polymer**-based gel where it remains. The ionic species behaves like a liquid electrolyte, while at the same time, the **polymer**-based solid gel **membrane** provides a smooth impenetrable surface that allows for the exchange of ions. An advantage of the novel **membrane** is that its measured ionic conductivity is much higher than previously observed in prior art solid electrolytes or electrolyte-**polymer** films.

IC ICM H01M006-22
ICS H01M012-06; H01B001-12; C08F251-02; C08F257-02; C08L051-02; C08F251-00; C08F273-00; B01D069-10; G02F001-15

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): **35**, **38**, 74

ST battery electrolyte gel **membrane**; fuel cell electrolyte gel **membrane**; electrochromic device electrolyte gel **membrane** ; display device electrolyte gel **membrane**

IT Windows
Windows
(electrochromic; ionic conducting **polymer**-based solid gel **membrane**)

IT Optical imaging devices
(flat panel; ionic conducting **polymer**-based solid gel **membrane**)

IT Fuel cell separators
Fuel cells
Polymerization
Polymerization catalysts
Secondary batteries
Secondary battery separators
(ionic conducting **polymer**-based solid gel **membrane**)

IT Polyamides, uses
Polyolefins
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(ionic conducting **polymer**-based solid gel **membrane**)

IT Polyesters, uses
Polysulfones, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(ionic conducting **polymer**-based solid gel **membrane**)

IT Alkali metal oxides

RL: CAT (Catalyst use); USES (Uses)
(peroxides; ionic conducting **polymer**-based solid gel **membrane**)

IT Peroxysulfates
RL: CAT (Catalyst use); USES (Uses)
(peroxydisulfates, alkali metal; ionic conducting **polymer**-based solid gel **membrane**)

IT **Polymerization**
(**photopolymn.**; ionic conducting **polymer**-based solid gel **membrane**)

IT **Polymerization**
(radiochem.; ionic conducting **polymer**-based solid gel **membrane**)

IT Electrochromic devices
Electrochromic devices
(windows; ionic conducting **polymer**-based solid gel **membrane**)

IT 50926-11-9, Ito
RL: TEM (Technical or engineered material use); USES (Uses)
(glass; ionic conducting **polymer**-based solid gel **membrane**)

IT 7727-54-0, Ammonium persulfate
RL: CAT (Catalyst use); USES (Uses)
(ionic conducting **polymer**-based solid gel **membrane**)

IT 1313-13-9, Manganese dioxide, uses 1313-99-1, Nickel oxide, uses 7429-90-5, Aluminum, uses 7439-89-6, Iron, uses 7439-93-2, Lithium, uses 7439-95-4, Magnesium, uses 7440-02-0, Nickel, uses 7440-05-3, Palladium, uses 7440-06-4, Platinum, uses 7440-43-9, Cadmium, uses 7440-44-0, Carbon, uses 7440-66-6, Zinc, uses 11104-61-3, Cobalt oxide 12194-71-7, Perovskite 20667-12-3, **Silver** oxide 30280-72-9, Acrylic acid-methylenebisacrylamide **copolymer** 84943-80-6, Acrylic acid-methylenebisacrylamide-1-vinyl-2-pyrrolidinone **copolymer**
RL: DEV (Device component use); USES (Uses)
(ionic conducting **polymer**-based solid gel **membrane**)

IT 1310-58-3, Potassium hydroxide, uses 1310-65-2, Lithium hydroxide 1310-73-2, Sodium hydroxide, uses 7601-90-3, Perchloric acid, uses 7647-01-0, Hydrochloric acid, uses 7647-14-5, Sodium chloride, uses 7664-38-2, Phosphoric acid, uses 7664-93-9, Sulfuric acid, uses 7778-80-5, Potassium sulfate, uses 9002-89-5, Polyvinyl **alcohol** 9004-34-6, Cellulose, uses 12125-02-9, Ammonium chloride, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(ionic conducting **polymer**-based solid gel **membrane**)

IT 79-06-1, 2-Propenamide, reactions 79-10-7, Acrylic acid, reactions 79-41-4, reactions 88-12-0, 1-Vinyl-2-pyrrolidinone, reactions 110-17-8, Fumaric acid, reactions 110-26-9 541-47-9, 3,3-Dimethyl acrylic acid 627-64-5, Fumaramide 2210-25-5, N-Isopropylacryl amide 2680-03-7 3039-83-6, Vinylsulfonic acid, sodium salt 10117-38-1, Potassium sulfite
RL: RCT (Reactant); RACT (Reactant or reagent)
(ionic conducting **polymer**-based solid gel **membrane**)

IT 9004-32-4, Carboxymethyl cellulose 9005-25-8, Corn starch, uses 25038-59-9, Polyethylene **terephthalate**, uses 25704-18-1, Poly(sodium 4-styrenesulfonate) 97917-26-5, Acrylamide-Methacrylic acid-methylenebis(acrylamide) **copolymer** 104983-61-1, Maleic acid-styrenesulfonic acid **copolymer**, sodium salt
RL: TEM (Technical or engineered material use); USES (Uses)
(ionic conducting **polymer**-based solid gel **membrane**)

L37 ANSWER 26 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:577098 HCAPLUS
DN 131:181945
TI Process for producing an electrochemical biosensor
IN Say, James; Tomasco, Michael F.; Heller, Adam; Gal, Yoram; Aria, Behrad; Heller, Ephraim; Plante, Phillip J.; Vreeke, Mark S.
PA E. Heller & Co., USA
SO PCT Int. Appl., 82 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9945375	A1	19990910	WO 1999-US3781	19990222
	W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9927797	A1	19990920	AU 1999-27797	19990222
	EP 1060388	A1	20001220	EP 1999-908338	19990222
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002506205	T2	20020226	JP 2000-534863	19990222
	US 2003188427	A1	20031009	US 2003-405765	20030331
PRAI	US 1998-34422	A	19980304		
	WO 1999-US3781	W	19990222		
	US 2000-598776	A1	20000616		

AB A process for the manufacture of small sensors with reproducible surfaces, including electrochem. sensors. One process includes forming channels in the surface of a **substrate** and disposing a conductive material in the channels to form an electrode. The conductive material can also be formed on the **substrate** by other impact and non-impact methods. In a preferred embodiment, the method includes the steps of providing a continuous **substrate** web, and disposing a pattern of a conductive material on the continuous **substrate** web to form one or more working electrodes and/or counter electrodes.
IC ICM G01N027-327
ICS C12Q001-00; G01N033-543
CC 9-1 (Biochemical Methods)
ST process electrochem biosensor
IT Inks
(Conductive; process for producing electrochem. biosensor)
IT Printing (nonimpact)
(Electrophotog.; process for producing electrochem. biosensor)
IT Printing (nonimpact)
(Ionog.; process for producing electrochem. biosensor)
IT Printing (nonimpact)
(Piezo jet; process for producing electrochem. biosensor)
IT **Polymers**, uses
RL: DEV (Device component use); USES (Uses)
(co-; process for producing electrochem. biosensor)
IT Electrodes

(counter; process for producing electrochem. biosensor)
IT Biosensors
(electrochem.; process for producing electrochem. biosensor)
IT Polyesters, uses
RL: DEV (Device component use); USES (Uses)
(glycol-modified; process for producing electrochem. biosensor)
IT Adhesion, physical
Welding of metals
(laser; process for producing electrochem. biosensor)
IT Printing (nonimpact)
(magnetog.; process for producing electrochem. biosensor)
IT Adhesive bonding
Ceramics
Electrodes
Films
Ink-jet printing
Membranes, nonbiological
Pastes
Printing (nonimpact)
Temperature sensors
Welding
(**process** for **producing** electrochem. biosensor)
IT Epoxy resins, uses
Metals, uses
Plastics, uses
Polycarbonates, uses
Polyesters, uses
Polymers, uses
RL: DEV (Device component use); USES (Uses)
(process for producing electrochem. biosensor)
IT Glycols, uses
RL: NUU (Other use, unclassified); USES (Uses)
(process for producing electrochem. biosensor)
IT Adhesion, physical
(**solvent**; process for producing electrochem. biosensor)
IT Sound and Ultrasound
(welding; process for producing electrochem. biosensor)
IT 7782-44-7, Oxygen, analysis
RL: ANT (Analyte); ANST (Analytical study)
(process for producing electrochem. biosensor)
IT 1317-82-4, Sapphire 7440-21-3D, Silicon, etched, uses 7440-22-4, **Silver**, uses 7440-44-0, Carbon, uses 7440-50-8, Copper, uses 7440-57-5, Gold, uses 12597-69-2, Steel, uses 25038-59-9D, Polyethylene **terephthalate**, glycol-modified
RL: DEV (Device component use); USES (Uses)
(process for producing electrochem. biosensor)
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 27 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:566291 HCAPLUS
DN 131:172705
TI Ion conductive matrixes and their use in electrochemical devices
IN Peled, Emanuel; Duvdevani, Tair; Melman, Avi
PA Ramot University Authority for Applied Research & Industrial Development, Israel
SO PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DT Patent

LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9944245	A1	19990902	WO 1999-IL109	19990222
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	IL 123419	A1	20001206	IL 1998-123419	19980224
	IL 126830	A1	20010520	IL 1998-126830	19981030
	CA 2320696	AA	19990902	CA 1999-2320696	19990222
	AU 9926369	A1	19990915	AU 1999-26369	19990222
	EP 1066656	A1	20010110	EP 1999-906424	19990222
	R: DE, ES, FR, GB, IT, NL, SE				
	JP 2002505506	T2	20020219	JP 2000-533910	19990222
PRAI	IL 1998-123419	A	19980224		
	IL 1998-126830	A	19981030		
	WO 1999-IL109	W	19990222		

AB The present invention provides an ion conducting matrix comprising: (i) 5 to 60% by volume of an inorg. powder having a good aqueous electrolyte absorption capacity, (ii) 5 to 50% by volume of a **polymeric** binder that is chemical compatible with an aqueous electrolyte, and (iii) 10 to 90% by volume of an aqueous electrolyte, wherein the inorg. powder comprises essentially sub-micron particles. The present invention further provides a **membrane** being a film made of the matrix of the invention and a composite electrode comprising 10 to 70% by volume of the matrix of the invention.

IC ICM H01M004-58
ICS H01M006-14; H01M006-18; H01M006-16; H01M004-86; H01M004-62; H01M004-34; H01M004-32; H01M004-50; H01M004-42; H01M006-00; C25B011-04; C25B013-00; C25B009-00; C08J005-20; B23P019-00

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): **38**, 72, 76

ST battery ion conductive matrix; capacitor ion conductive matrix

IT Primary batteries
(Zn-air; ion conductive matrixes and their use in electrochem. devices)

IT Carboxylic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(aliphatic, esters, lubricants; ion conductive matrixes and their use in electrochem. devices)

IT Carboxylic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(aromatic, esters, lubricants; ion conductive matrixes and their use in electrochem. devices)

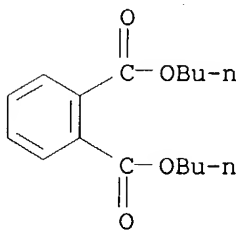
IT **Fluoropolymers**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(binder; ion conductive matrixes and their use in electrochem. devices)

IT Carboxylic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(dicarboxylic, aliphatic, esters, lubricants; ion conductive matrixes and their use in electrochem. devices)

IT Carboxylic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)

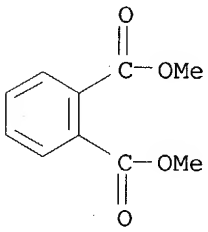
(dicarboxylic, aryl, esters, lubricants; ion conductive matrixes and their use in electrochem. devices)
IT Capacitors
(double layer; ion conductive matrixes and their use in electrochem. devices)
IT Hydrocarbons, uses
RL: MOA (Modifier or additive use); USES (Uses)
(fluoro, lubricants; ion conductive matrixes and their use in electrochem. devices)
IT Fuel cells
Membranes, nonbiological
(ion conductive matrixes and their use in electrochem. devices)
IT Metalloporphyrins
Oxides (inorganic), uses
RL: CAT (Catalyst use); USES (Uses)
(ion conductive matrixes and their use in electrochem. devices)
IT Lubricants
(liquid; ion conductive matrixes and their use in electrochem. devices)
IT Hydrocarbons, uses
Polysiloxanes, uses
RL: MOA (Modifier or additive use); USES (Uses)
(lubricants; ion conductive matrixes and their use in electrochem. devices)
IT Polysulfones, uses
Polysulfones, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(polyamide-, binder; ion conductive matrixes and their use in electrochem. devices)
IT Binders
(**polymer**; ion conductive matrixes and their use in electrochem. devices)
IT Polyamides, uses
Polyamides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(polysulfone-, binder; ion conductive matrixes and their use in electrochem. devices)
IT Electrolytic cells
(water; ion conductive matrixes and their use in electrochem. devices)
IT 7429-90-5, Aluminum, uses 7440-43-9, Cadmium, uses 7440-66-6, Zinc, uses
RL: DEV (Device component use); USES (Uses)
(anodes; ion conductive matrixes and their use in electrochem. devices)
IT 9002-84-0 9002-86-2, Pvc 9003-05-8, Polyacrylamide 9011-14-7, Pmma 9011-17-0, Polyvinylidene fluoride hexafluoropropylene 24937-79-9 24981-14-4, Polyvinyl fluoride 25014-41-9, Polyacrylonitrile
RL: TEM (Technical or engineered material use); USES (Uses)
(binder; ion conductive matrixes and their use in electrochem. devices)
IT 1313-13-9, Manganese dioxide, uses 20667-12-3, **Silver** oxide 55070-72-9, Nickel hydroxide oxide
RL: DEV (Device component use); USES (Uses)
(cathodes; ion conductive matrixes and their use in electrochem. devices)
IT 1314-35-8, Tungsten oxide, uses 12036-10-1, Ruthenium dioxide
RL: DEV (Device component use); USES (Uses)
(electrode; ion conductive matrixes and their use in electrochem. devices)
IT 7440-44-0, Carbon, uses 7782-42-5, Graphite, uses
RL: DEV (Device component use); USES (Uses)
(electrodes; ion conductive matrixes and their use in electrochem.

devices)
IT 7439-96-5, Manganese, uses 7440-05-3, Palladium, uses 7440-06-4, Platinum, uses 7440-22-4, **Silver**, uses 7440-33-7, Tungsten, uses 7440-50-8, Copper, uses 7440-57-5, Gold, uses
RL: CAT (Catalyst use); USES (Uses)
(ion conductive matrixes and their use in electrochem. devices)
IT 354-88-1, Ethanesulfonic acid, pentafluoro- 375-73-5, Nonafluorobutanesulfonic acid 423-41-6 1493-13-6 2706-91-4, 1-Pentanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,5-undecafluoro- 14970-71-9, Dithionic acid 40856-11-9 41062-44-6 56344-03-7 82727-18-2
RL: DEV (Device component use); USES (Uses)
(ion conductive matrixes and their use in electrochem. devices)
IT 1303-86-2, Boron oxide b2o3, uses 1314-23-4, Zirconia, uses 1344-28-1, Aluminum oxide (Al2O3), uses 7631-86-9, Silica, uses 13463-67-7, Titania, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(ion conductive matrixes and their use in electrochem. devices)
IT 10043-35-3, Boric acid (H3BO3), uses 12651-23-9, Titanium hydroxide 12713-25-6, Zirconium hydroxide oxide 12738-89-5, Titanium hydroxide oxide 14475-63-9, Zirconium hydroxide 21645-51-2, Aluminum hydroxide, uses 24623-77-6, Aluminum hydroxide oxide
RL: MOA (Modifier or additive use); USES (Uses)
(ion conductive matrixes and their use in electrochem. devices)
IT 67-64-1, 2-Propanone, uses 68-12-2, uses 78-93-3, Ethyl methyl ketone, uses 84-66-2, Diethyl **phthalate 84-74-2**, Dibutyl **phthalate** 96-48-0 96-49-1, Ethylene carbonate 102-76-1, Glycerol triacetate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 108-94-1, Cyclohexanone, uses **109-99-9**, uses 110-12-3, Isoamyl methyl ketone 110-71-4 120-92-3, Cyclopentanone 127-19-5, Dimethyl acetamide **131-11-3**, Dimethyl **phthalate** 616-38-6, Dimethyl carbonate 872-50-4, n-Methylpyrrolidone, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(ion conductive matrixes and their use in electrochem. devices)
IT 124-18-5, Decane 238407-65-3, Yivac 06/6
RL: MOA (Modifier or additive use); USES (Uses)
(lubricant; ion conductive matrixes and their use in electrochem. devices)
IT 7664-38-2D, Phosphoric acid, ester, uses
RL: MOA (Modifier or additive use); USES (Uses)
(lubricants; ion conductive matrixes and their use in electrochem. devices)
IT **84-74-2**, Dibutyl **phthalate 109-99-9**, uses **131-11-3**, Dimethyl **phthalate**
RL: TEM (Technical or engineered material use); USES (Uses)
(ion conductive matrixes and their use in electrochem. devices)
RN 84-74-2 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



RN 109-99-9 HCAPLUS
CN Furan, tetrahydro- (7CI, 8CI, 9CI) (CA INDEX NAME)

RN 131-11-3 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dimethyl ester (9CI) (CA INDEX NAME)



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 28 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:141223 HCAPLUS
DN 130:163207
TI Use of locally delivered metal ions for treatment of periodontal disease
IN Roberts, F. Donald; Friden, Phillip M.; Spacciapoli, Peter; Nelson, Eric
PA Periodontix, Inc., USA
SO PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9908691	A2	19990225	WO 1998-US16738	19980813
	WO 9908691	A3	19990506		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,

CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

	US 6153210	A	20001128	US 1997-911413	19970814
	CA 2301065	AA	19990225	CA 1998-2301065	19980813
	AU 9890178	A1	19990308	AU 1998-90178	19980813
	EP 1011693	A1	20000628	EP 1998-942041	19980813
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2001515042	T2	20010918	JP 2000-509430	19980813
	NO 2000000688	A	20000315	NO 2000-688	20000211
PRAI	US 1997-911413	A	19970814		
	WO 1998-US16738	W	19980813		

AB Periodontal disease can be treated by the administration of metal ions, preferably silver ions, to the site where the microorganisms that cause this disease reside. Administration can be to periodontal pockets or adjacent to exposed tooth roots or alveolar bone during periodontal surgical procedures. The metal ions can be administered in polymeric microparticles, deformable films or microparticles embedded within deformable films. The metal ions are particularly microbiocidal to the bacterial pathogens that are the causative agents of periodontal disease.

IC ICM A61K033-38
ICS A61K009-70

CC 1-12 (Pharmacology)
Section cross-reference(s): 63

ST metal ion antimicrobial periodontal disease; silver ion antimicrobial periodontal disease; bactericide periodontal disease metal ion; microparticle film metal ion periodontal disease

IT Polyurethanes, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(acrylates; metal ions, locally delivered, for treatment of periodontal disease)

IT Jaw
(alveolar bone; metal ions, locally delivered, for treatment of periodontal disease)

IT Proteins, specific or class
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(complexes, with silver; metal ions, locally delivered, for treatment of periodontal disease)

IT Periodontium
(disease; metal ions, locally delivered, for treatment of periodontal disease)

IT Drug delivery systems
(films; metal ions, locally delivered, for treatment of periodontal disease)

IT Drug delivery systems
(gels; metal ions, locally delivered, for treatment of periodontal disease)

IT Drug delivery systems
(liqs.; metal ions, locally delivered, for treatment of periodontal disease)

IT Actinomyces viscosus
Antibacterial agents
Antimicrobial agents
Bacteroides forsythus
Campylobacter gracilis
Campylobacter rectus
Drug delivery systems
Eikenella corrodens

Fusobacterium nucleatum vincentii
Granulicatella adiacens
Haemophilus actinomycetemcomitans
Peptostreptococcus micros
Porphyromonas gingivalis
Prevotella intermedia
Prevotella nigrescens
Ralstonia pickettii
Streptococcus intermedius
Streptococcus mutans
Streptococcus sobrinus
Treponema denticola
(metal ions, locally delivered, for treatment of periodontal disease)

IT Metals, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metal ions, locally delivered, for treatment of periodontal disease)

IT Collagens, biological studies
Gelatins, biological studies
Polyamides, biological studies
Polyanhydrides
Polycarbonates, biological studies
Polyesters, biological studies
Polymers, biological studies
Polyolefins
Polyoxyalkylenes, biological studies
Polysulfones, biological studies
Polyurethanes, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metal ions, locally delivered, for treatment of periodontal disease)

IT Drug delivery systems
(microparticles; metal ions, locally delivered, for treatment of periodontal disease)

IT Polyethers, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ortho ester group-containing; metal ions, locally delivered, for treatment of periodontal disease)

IT Surgery
(periodontal; metal ions, locally delivered, for treatment of periodontal disease)

IT Periodontium
(periodontitis; metal ions, locally delivered, for treatment of periodontal disease)

IT Periodontium
(pocket; metal ions, locally delivered, for treatment of periodontal disease)

IT Polyamides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(poly(amino acids); metal ions, locally delivered, for treatment of periodontal disease)

IT Polyurethanes, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyether-; metal ions, locally delivered, for treatment of periodontal disease)

IT Tooth
(root; metal ions, locally delivered, for treatment of periodontal disease)

IT Drug delivery systems

(slow-release; metal ions, locally delivered, for treatment of periodontal disease)

IT Drug delivery systems
(solids; metal ions, locally delivered, for treatment of periodontal disease)

IT Ethers, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(vinyl, alkyl vinyl, polymers; metal ions, locally delivered, for treatment of periodontal disease)

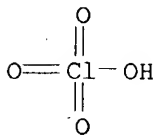
IT 563-63-3, Silver acetate 7439-89-6, Iron, biological studies 7440-02-0, Nickel, biological studies 7440-22-4, Silver, biological studies 7440-22-4D, Silver, protein complexes, biological studies 7440-50-8, Copper, biological studies 7440-66-6, Zinc, biological studies 7447-39-4, Copper (II) chloride, biological studies 7761-88-8, Silver nitrate, biological studies 7775-41-9, Silver fluoride 7783-89-3, Silver bromate 7783-91-7, Silver chlorite 7783-92-8, Silver chlorate **7783-93-9**, Silver perchlorate 7783-98-4, Silver permanganate 7783-99-5, Silver nitrite 10294-26-5, Silver sulfate 15768-18-0, Silver lactate 22199-08-2, Silver sulfadiazine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metal ions, locally delivered, for treatment of periodontal disease)

IT 57-55-6, Propylene glycol, biological studies 108-05-4D, Vinyl acetate, alkylene-vinyl acetate copolymers 9002-86-2, Polyvinyl chloride **9003-01-4**, Polyacrylic acid **9003-01-4D**, Polyacrylic acid, crosslinked 9003-11-6, Ethylene oxide-propylene oxide copolymer **9003-20-7**, Polyvinyl acetate 9003-42-3, Polyethylmethacrylate 9003-53-6, Polystyrene 9003-54-7, Styrene-acrylonitrile copolymer 9004-35-7, Cellulose acetate 9004-57-3, Ethyl cellulose 9004-62-0, Hydroxyethyl cellulose 9004-64-2, Hydroxypropyl cellulose 9004-65-3, Hydroxypropylmethyl cellulose 9005-32-7, Alginic acid 24981-14-4, Polyvinyl fluoride 25038-59-9, Poly(ethylene **terephthalate**), biological studies 25190-06-1, Polytetramethylene glycol 25232-42-2, Poly(vinyl imidazole) 25322-68-3, Polyethylene glycol 25322-69-4, Polypropylene glycol 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26355-01-1, Hydroxyethyl methacrylate-methyl methacrylate copolymer 26680-10-4, Polylactide 26780-50-7, Lactide-glycolide copolymer 34346-01-5, Lactic acid-glycolic acid copolymer 106392-12-5, Pluronic 126040-58-2, Calcium polycarbophil
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metal ions, locally delivered, for treatment of periodontal disease)

IT 7440-21-3, Silicon, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(silicon/ethylcellulose/polyethylene glycol; metal ions, locally delivered, for treatment of periodontal disease)

IT **7783-93-9**, Silver perchlorate
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metal ions, locally delivered, for treatment of periodontal disease)

RN 7783-93-9 HCAPLUS
CN Perchloric acid, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)

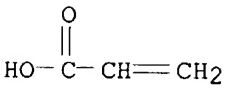


● Ag(I)

IT **9003-01-4**, Polyacrylic acid **9003-01-4D**, Polyacrylic acid, crosslinked **9003-20-7**, Polyvinyl acetate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metal ions, locally delivered, for treatment of periodontal disease)
RN 9003-01-4 HCAPLUS
CN 2-Propenoic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

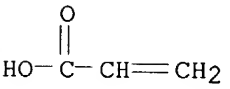
CRN 79-10-7
CMF C3 H4 O2



RN 9003-01-4 HCAPLUS
CN 2-Propenoic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

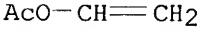
CRN 79-10-7
CMF C3 H4 O2



RN 9003-20-7 HCAPLUS
CN Acetic acid ethenyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 108-05-4
CMF C4 H6 O2



L37 ANSWER 29 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:762114 HCAPLUS

DN 128:69474
TI Electrically conductive paste containing network-structured **silver** powder
IN Aoki, Takao; Tajika, Hiroshi; Sasahara, Kazuhiro
PA Toyobo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09306240	A2	19971128	JP 1996-150105	19960520
PRAI	JP 1996-150105		19960520		

AB The paste comprise 1-20 μm 3-dimensional network-structured elec. conductive **Ag** secondary grain powders (A) from 0.1-5-μm primary grains, a binder (B) with number-average mol. weight ≥3000, a reactive curing agent (C), and a **solvent** with the weight ratio of A/(B + C) (60/40)-(95/5) and B/C (100/0)-(50/50), on which a metal plating is not applied after curing. The paste shows improved fine-pattern printability, low elec. resistance, and good bending resistance to be useful for **membrane**-type elec. circuits.

IC ICM H01B001-22
ICS H05K001-09
CC 76-2 (Electric Phenomena)
Section cross-reference(s): **38**
ST elec conductor paste **silver** powder network; **membrane** elec circuit conductor paste
IT Films
Films
(elec. circuits; elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)
IT Crosslinking agents
Electrically conductive pastes
(elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)
IT Polyesters, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)
IT Electric circuits
Electric circuits
(film; elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)
IT Polyurethanes, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyester-; elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)
IT 173859-25-1, UR 1400
RL: TEM (Technical or engineered material use); USES (Uses)
(UR 1400, binder; elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)
IT 54190-40-8P 63929-60-2P, Dimethyl **isophthalate**-dimethyl **terephthalate**-ethylene glycol-neopentyl glycol-sebacic acid **copolymer**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(binder; elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)

IT 9003-22-9, VYHH 25086-48-0, VAGH
RL: TEM (Technical or engineered material use); USES (Uses)
(binder; elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)

IT 200292-58-6P, Hexamethylene diisocyanate isocyanurate-vinyl acetate-vinyl **alcohol**-vinyl chloride **copolymer** 200292-59-7P, Dimethyl **isophthalate**-dimethyl **terephthalate**-ethylene glycol-hexamethylene diisocyanate isocyanurate-neopentyl glycol-sebacic acid-vinyl acetate-vinyl **alcohol**-vinyl chloride **copolymer** 200292-60-0P, 1,2-Ethanediol-1,3-benzenedicarboxylic acid-2,2-dimethyl-1,3-propanediol-4,4'-MDI-hexamethylene diisocyanate biuret **copolymer** 200292-61-1P, Dimethyl **isophthalate** -dimethyl **terephthalate**-ethylene glycol-neopentyl glycol-sebacic acid-hexamethylene diisocyanate biuret **copolymer** 200292-62-2P, Dimethyl **isophthalate**-dimethyl **terephthalate**-ethylene glycol-neopentyl glycol-hexamethylene diisocyanate biuret **copolymer**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(crosslinked; elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)

IT 96-29-7D, Methyl ethyl ketoxime, reaction products with hexamethylene diisocyanate isocyanurate and hexamethylene diisocyanate biuret trimer 3779-63-3D, Hexamethylene diisocyanate isocyanurate, reaction products with Me Et ketoxime 172923-52-3D, reaction products with Me Et ketoxime
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(crosslinking agent; elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)

L37 ANSWER 30 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:222455 HCAPLUS
DN 124:248256
TI **Membrane** circuit boards with notched connectors
IN Suga, Kenji
PA Mitsumi Electric Co, Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08032193	A2	19960202	JP 1994-184028	19940713
PRAI	JP 1994-184028		19940713		

AB The title circuit boards comprise a polyethylene **terephthalate** **substrate** having a notched connector on its side-end, **Ag** paste-printed circuit layer provided on the surface of the **substrate** and the notches, and an insulator layer covering the circuit except the connector portion. The arrangement gives the circuit boards a decreased contact resistance and an increased connection strength.
IC ICM H05K001-11
ICA H05K001-02
CC 76-14 (Electric Phenomena)
Section cross-reference(s): **38**, 56
ST **membrane** circuit board **silver** notched connector

IT **Membranes**
(circuit boards; **membrane** circuit boards with notched connectors)
IT Electric conductors
(**silver** paste; **membrane** circuit boards with notched connectors)
IT Electric contacts
(**silver**; **membrane** circuit boards with notched connectors)
IT Electric circuits
(printed, boards, **membrane** circuit boards with notched connectors)
IT 7440-22-4, **Silver**, properties
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(**membrane** circuit boards with notched connectors)
IT 25038-59-9, Poly(ethylene **terephthalate**), uses
RL: DEV (Device component use); **POF (Polymer in formulation)**; USES (Uses)
(**membrane**, circuit **substrate**; **membrane** circuit boards with notched connectors)

L37 ANSWER 31 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1994:449171 HCAPLUS
DN 121:49171
TI PVC **membrane** electrodes for manual and flow-injection determination of tetraphenylborate: applications to separate and sequential titrations of some metal ions
AU Hassan, Saad S. M.; Badr, Ibrahim H. A.
CS Fac. Sci., Ain Shams Univ., Cairo, Egypt
SO Talanta (1994), 41(4), 523-30
CODEN: TLNTA2; ISSN: 0039-9140
DT Journal
LA English
AB Three novel poly(vinyl chloride) matrix **membrane** electrodes, highly sensitive and selective for tetraphenylborate anion (TPB), are developed and electrochem. evaluated. They are based on the use of iron(II) bathophenanthroline, nickel(II) bathophenanthroline, and nitron ion-pair complexes with TPB as electroactive materials and dioctyl **phthalate** (DO) and 2-nitrophenyl Ph ether (NPPE) as plasticizing **solvent** mediators. The electrodes exhibit stable and rapid near-Nernstian response for 10-2-10-6 M TPB over the pH range 4-10. Use of these electrodes for direct potentiometric determination and potentiometric titration of ≥1 μg of TPB/mL and 0.6 mg of TPB/mL give results with average recoveries of 99.3% (mean standard deviation 0.5%) and 99.4% (mean standard deviation 0.2%), resp. Incorporation of the nitron-TPB PVC sensor in a flow-through sandwich cell provides an efficient flow-injection detector for determining TPB with an input rate of at least 60 samples/h. The limit of detection is 1.6 μg TPB/mL in a 20-μL sample. The electrodes are also used to monitor sep. and sequential titrns. of some metal ions (**Ag**, Tl, K) and NH4+ with TPB. Alkaline earth (Ba, Ca, Sr) and transition metal (Cd, Pb [sic], Pd, Ni, Zn) ions upon reaction with polyethylene glycol and ethylenediamine, resp., form cationic complexes readily titrated with TPB. Optimum conditions are outlined for sequential titrns. of various combinations of metallic species.
CC 79-2 (Inorganic Analytical Chemistry)
Section cross-reference(s): **38**, 72, 80
ST tetraphenylborate selective electrode use metal detn; metal detn potentiometric titrn; flow injection potentiometry tetraphenylborate detn

IT Alkaline earth metals
Transition metals, analysis
RL: ANT (Analyte); ANST (Analytical study)
(determination of, by potentiometric titration with tetraphenylborate)
IT Titration
(potentiometric, of metal ions with tetraphenylborate)
IT Electrodes
(tetraphenylborate-selective, based on iron bathophenanthroline and nickel bathophenanthroline and nitron ion-pair complexes with tetraphenylborate)
IT 117-81-7, Dioctyl **phthalate** 2216-12-8, 2-Nitrophenyl phenyl ether
RL: ANST (Analytical study)
(as plasticizing **solvent** mediator in tetraphenylborate selective electrodes)
IT 4358-26-3, Tetraphenylborate
RL: ANT (Analyte); ANST (Analytical study)
(determination and use of, in potentiometric titration of metals, ion selective
electrodes for)
IT 7439-92-1, Lead, analysis 7440-02-0, Nickel, analysis 7440-05-3, Palladium, analysis 7440-09-7, Potassium, analysis 7440-22-4, **Silver**, analysis 7440-24-6, Strontium, analysis 7440-28-0, Thallium, analysis 7440-39-3, Barium, analysis 7440-43-9, Cadmium, analysis 7440-66-6, Zinc, analysis 7440-70-2, Calcium, analysis 14798-03-9, Ammonium, analysis
RL: ANT (Analyte); ANST (Analytical study)
(determination of, by potentiometric titration with tetraphenylborate)
IT 25322-68-3, Polyethylene glycol
RL: ANST (Analytical study)
(in determination of alkaline earth metals by subsequent potentiometric titration)
IT 107-15-3, Ethylenediamine, uses
RL: USES (Uses)
(in determination of transition metals by subsequent potentiometric titration)
IT 156057-34-0 156189-90-1 156189-91-2
RL: ANST (Analytical study)
(in tetraphenylborate selective electrodes)
IT 9002-86-2, Poly(vinyl chloride)
RL: ANST (Analytical study)
(**membranes**, in tetraphenylborate selective electrodes)

L37 ANSWER 32 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1993:595652 HCAPLUS
DN 119:195652
TI Heparin-selective **polymeric membrane** electrode
IN Ma, Shu Ching; Meyerhoff, Mark E.; Yang, Victor C.
PA University of Michigan, USA
SO U.S., 10 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5236570	A	19930817	US 1992-849218	19920310
	WO 9318396	A1	19930916	WO 1993-US2149	19930310
	W: CA, JP				

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

	EP 630472	A1	19941228	EP 1993-907373	19930310
	EP 630472	B1	20010502		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE

	JP 07507137	T2	19950803	JP 1993-515976	19930310
	JP 3390439	B2	20030324		
	AT 200930	E	20010515	AT 1993-907373	19930310
	US 5453171	A	19950926	US 1993-107321	19930816
	US 5607567	A	19970304	US 1995-477605	19950607
PRAI	US 1992-849218	A	19920310		
	WO 1993-US2149	W	19930310		
	US 1993-107321	A2	19930816		

AB An electrochem. sensor for determination of heparin in blood contains an anion exchange **membrane** consisting of a **polymer** matrix, an anion exchanger (quaternary ammonium, phosphonium, or arsonium salt), and a plasticizer. Thus, a solution of tridodecylmethylammonium chloride 3-4, PVC 132, and dioctyl sebacate (plasticizer) 66 mg in .apprx.1.5 mL **THF** was cast on a glass slide and dried to a film .apprx.200 μm thick. This film was mounted on an electrode body containing a **Ag** /AgCl electrode and a 0.015M NaCl reference solution, and the potentiometric response to heparin in a sample solution was measured against a **Ag** /AgCl double junction reference electrode. The response was linear over the range 0.2-1.0 U heparin/mL in the presence of 0.12M Cl-.

IC ICM G01N027-26

NCL 204418000

CC 1-1 (Pharmacology)
Section cross-reference(s): 9

ST heparin selective electrode **membrane**

IT Blood analysis
(heparin determination in, heparin-selective **membrane** electrode for)

IT Plasticizers
Phosphonium compounds
Polymers, uses
Quaternary ammonium compounds, uses
Urethane **polymers**, uses
RL: BIOL (Biological study)
(in heparin-selective electrode **membrane**)

IT Onium compounds
RL: BIOL (Biological study)
(arsonium, in heparin-selective electrode **membrane**)

IT Electrodes
(**membrane**, heparin-selective, anion exchanger and plasticizer in **polymeric**)

IT Anion exchangers
(**membranes**, in heparin-selective electrode)

IT Vinyl compounds, **polymers**
RL: BIOL (Biological study)
(**polymers**, in heparin-selective electrode **membrane**)

IT Fatty acids, compounds
RL: BIOL (Biological study)
(tall-oil, epoxidized, esters, with ethylhexanoic acid, in heparin-selective electrode **membrane**)

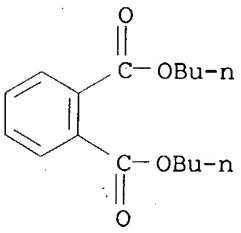
IT 9005-49-6, Heparin, analysis
RL: ANT (Analyte); ANST (Analytical study)
(determination of, heparin-selective **membrane** electrode for)

IT 57-09-0, Hexadecyltrimethylammonium bromide 64-20-0, Tetramethylammonium bromide 77-94-1, Tri-n-butyl citrate **84-74-2**, Dibutyl **phthalate** 84-78-6, Butyl octyl **phthalate** 109-31-9, Di-n-hexyl azelate 109-43-3, Dibutyl sebacate 112-62-9, Methyl oleate

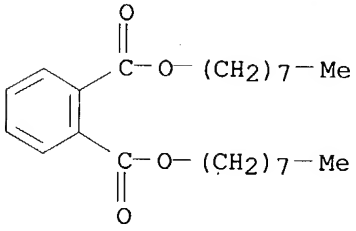
117-84-0, Dioctyl **phthalate** 122-62-3, Dioctyl sebacate 123-79-5 142-16-5 142-91-6, Isopropyl palmitate 311-28-4, Tetrabutylammonium iodide 528-44-9D, 1,2,4-Benzenetricarboxylic acid, C8-10-alkyl esters 866-97-7, Tetrapentylammonium bromide 1010-19-1, Triethylphenylammonium iodide 2567-83-1, Tetraethylammonium perchlorate 3426-74-2, Trimethylphenylammonium 3700-67-2, Dimethyldioctadecylammonium bromide 5137-55-3, Trioctylmethylammonium chloride 7173-54-8, Tridodecylmethylammonium chloride 9002-86-2, Poly(vinyl chloride) 9012-09-3, Cellulose triacetate 25822-51-9, Vinyl **alcohol**/vinyl chloride **copolymer** 27138-31-4, Dipropylene glycol dibenzoate 27554-26-3, Diisooctyl **phthalate** 28728-55-4, Polybrene 37682-29-4, o-Nitrophenyl octyl ether 56803-37-3 68171-33-5, Isopropyl isostearate 150729-91-2
RL: ANST (Analytical study)
(in heparin-selective electrode **membrane**)

IT **84-74-2**, Dibutyl **phthalate** **117-84-0**, Dioctyl **phthalate**
RL: ANST (Analytical study)
(in heparin-selective electrode **membrane**)

RN 84-74-2 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



RN 117-84-0 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dioctyl ester (9CI) (CA INDEX NAME)



L37 ANSWER 33 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1992:433744 HCAPLUS
DN 117:33744
TI two layer wound-covering materials
IN Koide, Mikio; Konishi, Jun; Ikegami, Kazuhito; Osaki, Kenichi
PA Terumo K. K., Japan
SO Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 475807	A2	19920318	EP 1991-402266	19910819
	EP 475807	A3	19930210		
	EP 475807	B1	19980114		
	R: BE, DE, FR, GB, IT, NL, SE				
	JP 04108454	A2	19920409	JP 1990-226663	19900830
	JP 04129561	A2	19920430	JP 1990-247301	19900919
	JP 2896216	B2	19990531		
	AU 9182530	A1	19920312	AU 1991-82530	19910816
	AU 643058	B2	19931104		
PRAI	JP 1990-226663		19900830		
	JP 1990-247301		19900919		

AB A two layer wound-covering material comprises a **supporting** layer to be contacted with the wound area and a layer of moisture permeation-controlling layer, and optionally either or both of layers containing an antimicrobial agent. The **supporting** layer is made of a film of a biocompatible highly aqueous gel-forming substance and at least a part of an area to be contacted with wound is coated with a water repellent substance. A nonwoven cloth made of Na CM-cellulose was immersed in a solution of Silastic silicone adhesive and dried before being immersed in CaCl2 solution and dried again. The cloth thus obtained was mounted on a teflon plate which had been applied with Silatic silicone adhesive to prepare a **membrane** which was cured at 60° to give the wound covering material of the invention. Rabbit wounds were covered with above wound-covering material for 2 wks., then rabbits were sacrificed. The wound-covering accelerated regeneration of the epidermis and prevented hypertrophy.

IC ICM A61L015-52
ICS A61L015-60

CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 1, **38**

ST wound dressing gel film; CM cellulose teflon wound dressing

IT Rubber, silicone, biological studies
RL: DEV (Device component use); USES (Uses)
(**membrane** from, wound-covering material containing)

IT Bactericides, Disinfectants, and Antiseptics
Siloxanes and Silicones, biological studies
Urethane **polymers**, biological studies
RL: BIOL (Biological study)
(wound-covering material containing)

IT Medical goods
(dressings, gel-forming film and water-repellent layer in)

IT Alkenes, **polymers**
RL: DEV (Device component use); USES (Uses)
(**polymers**, **membrane** from, wound-covering material containing)

IT Alkenes, **polymers**
RL: DEV (Device component use); USES (Uses)
(**polymers**, halogenated, **membrane** from, wound-covering material containing)

IT 25038-59-9, Polyethylene **terephthalate**, biological studies
RL: BIOL (Biological study)
(composite with poly(vinylidene fluoride) **membrane** from, wound-covering material containing)

IT 24937-79-9, Poly(vinylidene fluoride)
RL: BIOL (Biological study)
(composite with polyethylene **terephthalate**, **membrane** from, wound-covering material containing)

IT 79-10-7D, Acrylic acid, esters, **polymers** 79-41-4D, Methacrylic acid, esters, **polymers** 116-14-3D, **polymers** 1398-61-4D, Chitin, derivs. 9003-07-0, Polypropylene 9004-32-4, Sodium carboxymethyl cellulose 9004-61-9D, Hyaluronic acid, derivs. 9005-32-7D, Alginic acid, derivs. 9012-76-4D, Chitosan, derivs. 106107-54-4, Butadiene-styrene block **copolymer** 107241-00-9, Ethyl acrylate-propylene graft **copolymer** 132789-83-4, Ethyl acrylate-vinylidene fluoride graft **copolymer** 142063-96-5 142173-58-8 142224-77-9 142224-78-0 142224-79-1 142224-80-4
RL: DEV (Device component use); USES (Uses)
(**membrane** from, wound-covering material containing)

IT 7440-22-4D, **Silver**, compds. 7761-88-8, **Silver** nitrate, biological studies 22199-08-2, **Silver** sulfadiazine
RL: BIOL (Biological study)
(wound-covering material containing)

L37 ANSWER 34 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1992:217329 HCAPLUS
DN 116:217329
TI Process for concentrating or separating mixtures of organic compounds
IN Berger, Joseph; Feldkamp, Thomas; Lohse, Friedrich; Mueller, Manfred
PA Ciba-Geigy A.-G., Switz.
SO Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 463988	A2	19920102	EP 1991-810437	19910611
	EP 463988	A3	19920422		
	R: CH, DE, FR, GB, IT, LI				
	CA 2044719	AA	19911220	CA 1991-2044719	19910617
	US 5152899	A	19921006	US 1991-716714	19910617
	JP 05070398	A2	19930323	JP 1991-173429	19910619
PRAI	CH 1990-2037		19900619		

AB Semipermeable **membranes** comprising **polymers** of [CF2C(R1)2]wCF2CFR3 [R3 = (OCF2CFR2)x[O(CFR2y)zSO3M; R1, R2 = F, C1-10 perfluoroalkyl; M = H, ammonium cation, metal cation; w = 5-15; x = 0-6; y = 1-16; z = 0-16] are employed in separation of organic carboxylic salts from nonionic organic compds. Solns. of said salts and compds. in (alkoxy)alkanols under 1-10 MPa pressure are separated from pure **solvent** by said **membrane**. Permeation of the **membrane** by a nonionic compound is favored when M is a small univalent cation whereas permeation by salt is favored when M is a larger (multivalent) cation. Thus, salt is retained when M = **Ag**+ and nonpolar organic compds. are retained when M = C5+.

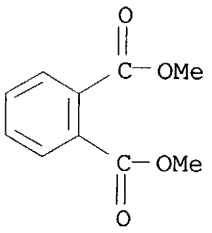
IC ICM B01D061-24
ICS C07C051-42
CC 48-1 (Unit Operations and Processes)
Section cross-reference(s): 45
ST org mixt sepn semipermeable **membrane**
IT Permeability and Permeation
(separation by, of carboxylate salts from nonionic organic compds., process for)
IT 79-20-9, Methyl acetate 80-40-0, Ethyl p-toluenesulfonate 93-58-3, Methyl benzoate 98-86-2, Acetophenone, preparation 100-51-6, Benzyl **alcohol**, preparation 100-66-3, Methylphenyl ether, preparation 101-41-7, Methylphenylacetate 103-26-4, Methylcinnamate **131-11-3**

, **Dimethylphthalate** 614-99-3, Ethylfuran-2-carboxylate
2396-84-1, Ethyl sorbate 3319-31-1
RL: PROC (Process)
(separation of, from carboxylate salt, **membrane process** for)

IT 553-54-8, Lithium benzoate 1470-83-3, Lithium p-toluenesulfonate
1863-63-4, Ammonium benzoate 15082-44-7, Lithiumphenylacetate
15968-00-0 83028-91-5, Lithium sorbate 110419-19-7 111730-83-7
141181-26-2 141181-27-3 141181-28-4
RL: PROC (Process)
(separation of, from nonionic organic compound, **membrane process** for)

IT **131-11-3, Dimethylphthalate**
RL: PROC (Process)
(separation of, from carboxylate salt, **membrane process** for)

RN 131-11-3 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dimethyl ester (9CI) (CA INDEX NAME)



L37 ANSWER 35 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1991:584636 HCAPLUS
DN 115:184636
TI Thermoplastic resin compositions with permanent antistatic property
IN Ishikawa, Hiroaki; Sasagawa, Masahiro; Kasahara, Hideo
PA Asahi Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03103466	A2	19910430	JP 1989-290058	19891109
PRAI	JP 1989-158313		19890622		

AB Impact-resistant antistatic compns. comprise (a) thermoplastic resins, (b) polyethylene oxide (I) or block copolymers with ≥50% I content, and (c) metal salts soluble in I, in amts. such that $0.03 \leq b/a \leq 0.3$ and $0.01 \leq c/b \leq 0.5$. Thus, 12:88 butadiene-styrene graft copolymer 87.5, 8:92 methacrylic acid-styrene copolymer 12.5, I 10, and K thiocyanate (II) 1 part were blended, pelletized, and molded to give sheets having Izod impact strength 14 kg-cm/cm, surface resistivity as prepared 8 + 109 and 9 + 109 Ω, and after 3 mo 8 + 109 and 10 + 109 Ω, with and without being dipped 10 min in water, resp., vs 10, 5 + 1013 and 5 + 1013, and 6 + 1013 and 7 + 1013, resp., for sheets containing 2 parts I and 1 part II, instead.

IC ICM C08L071-02

ICS C08L023-04; C08L025-04; C08L055-02; C08L071-02; C08L071-12
CC 37-6 (**Plastics** Manufacture and Processing)
Section cross-reference(s): 76
ST thermoplastic polyoxyethylene salt antistatic molding; potassium thiocyanate thermoplastic antistatic molding; impact resistance thermoplastic polyoxyethylene blend; butadiene styrene graft copolymer blend; methacrylic acid styrene copolymer blend
IT Salts, uses and miscellaneous
RL: USES (Uses)
(antistatic agents, thermoplastics containing polyethylene glycol and, impact-resistant)
IT Plastics, molded
Polyoxyphenylenes
Rubber, ethylene-propene
RL: USES (Uses)
(containing polyoxyethylene and metal salts, antistatic and impact-resistant)
IT Antistatic agents
(metal salts, thermoplastics containing polyethylene glycol and, impact-resistant)
IT Polyoxyalkylenes, uses and miscellaneous
RL: USES (Uses)
(polyamide-polyester-, block, thermoplastics containing metal salts and, antistatic and impact-resistant)
IT Polyesters, uses and miscellaneous
RL: USES (Uses)
(polyamide-polyoxyalkylene-, block, thermoplastics containing metal salts and, antistatic and impact-resistant)
IT Polyoxyalkylenes, uses and miscellaneous
RL: USES (Uses)
(polyester-, block, thermoplastics containing metal salts and, antistatic and impact-resistant)
IT Polyamides, uses and miscellaneous
RL: USES (Uses)
(polyester-polyoxyalkylene-, block, thermoplastics containing metal salts and, antistatic and impact-resistant)
IT Polyesters, uses and miscellaneous
RL: USES (Uses)
(polyoxyalkylene-, block, thermoplastics containing metal salts and, antistatic and impact-resistant)
IT 333-20-0 540-72-7 557-42-6, Zinc thiocyanate 2923-18-4
2923-28-6, Silver trifluoromethanesulfonate 2926-30-9
7447-39-4, Copper (II) chloride, uses and miscellaneous 7447-41-8, Lithium chloride (LiCl), uses and miscellaneous 7546-30-7, Mercury chloride (HgCl) 7550-35-8, Lithium bromide 7646-79-9, Cobalt (II) chloride, uses and miscellaneous 7646-85-7, Zinc chloride, uses and miscellaneous 7647-15-6, Sodium bromide, uses and miscellaneous 7681-11-0, Potassium iodide, uses and miscellaneous 7681-82-5, Sodium iodide, uses and miscellaneous 7699-45-8, Zinc bromide 7758-02-3, Potassium bromide, uses and miscellaneous 7758-94-3, Ferrous chloride 7789-45-9, Copper bromide (CuBr2) 7790-69-4, Lithium nitrate 10031-22-8, Lead bromide 10101-63-0, Lead iodide 10102-68-8, Calcium iodide 10108-64-2, Cadmium chloride 10139-47-6, Zinc iodide 10377-51-2, Lithium iodide 13462-88-9, Nickel bromide (NiBr2) 13755-29-8, Sodium borofluoride 13762-51-1, Potassium borohydride 13767-71-0, Copper iodide (CuI2) 14075-53-7, Potassium borofluoride **14104-20-2**, Silver borofluoride 14283-07-9 15192-76-4, Copper(II) thiocyanate 16940-66-2, Sodium borohydride 16949-15-8, Lithium borohydride 17084-13-8, Potassium hexafluorophosphate

21324-39-0, Sodium hexafluorophosphate 21324-40-3, Lithium hexafluorophosphate 34946-82-2, Copper(II) trifluoromethanesulfonate 54010-75-2, Zinc trifluoromethanesulfonate
RL: USES (Uses)
(antistatic agents, thermoplastics containing polyethylene glycol and, impact-resistant)

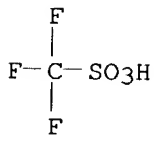
IT 9002-86-2, PVC 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-53-6, Polystyrene 9010-79-1, Ethylene-propylene copolymer 9010-92-8, Methacrylic acid-styrene copolymer **9011-14-7**, PMMA 27341-67-9, Acrylonitrile-methacrylic acid-styrene copolymer 106107-54-4, Butadiene-styrene block copolymer 106107-54-4D, Butadiene-styrene block copolymer, hydrogenated 106677-58-1, ABS graft copolymer 106974-54-3, Butadiene-styrene graft copolymer 112572-61-9, Butadiene-methacrylic acid-styrene graft copolymer
RL: USES (Uses)
(containing polyoxyethylene and metal salts, antistatic and impact-resistant)

IT 9010-79-1
RL: USES (Uses)
(rubber, containing polyoxyethylene and metal salts, antistatic and impact-resistant)

IT 25322-68-3 106343-12-8, Dimethyl **terephthalate**-ethylene glycol-polyethylene glycol block copolymer 113264-08-7
RL: USES (Uses)
(thermoplastics containing metal salts and, antistatic and impact-resistant)

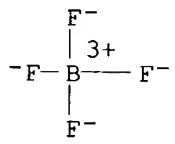
IT **2923-28-6**, Silver trifluoromethanesulfonate **14104-20-2**, Silver borofluoride
RL: USES (Uses)
(antistatic agents, thermoplastics containing polyethylene glycol and, impact-resistant)

RN 2923-28-6 HCAPLUS
CN Methanesulfonic acid, trifluoro-, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

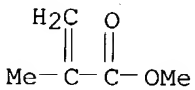
RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



IT **9011-14-7**, PMMA
RL: USES (Uses)
(containing polyoxyethylene and metal salts, antistatic and impact-resistant)
RN 9011-14-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 80-62-6
CMF C5 H8 O2



L37 ANSWER 36 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1991:255808 HCAPLUS
DN 114:255808
TI Method for paired electrochemical synthesis with simultaneous production of ethylene glycol
IN Weinberg, Norman L.; Genders, John D.; Mazur, Duane J.
PA Electrosynthesis Co., Inc., USA; SKA Associates
SO U.S., 10 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4950368	A	19900821	US 1989-335894	19890410
	JP 04009486	A2	19920114	JP 1989-339899	19891228
	ZA 9002521	A	19910327	ZA 1990-2521	19900402
	EP 392370	A2	19901017	EP 1990-106570	19900405
	EP 392370	A3	19910724		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	CA 2014055	AA	19901010	CA 1990-2014055	19900406
	JP 03056683	A2	19910312	JP 1990-94922	19900410
PRAI	US 1989-335894		19890410		

AB Paired electrochem. synthesis reactions are described in which ethylene glycol is formed at the cathode of a **membrane** divided cell at high concns. and current efficiencies ≤99%. Simultaneously, a

compatible process is also conducted at the anode of the same electrochem. cell by reacting indirectly generated anode products with organic **substrates** to form secondary products, such as polybasic acids. The process is especially advantageous in that such secondary products, where appropriate, can be further reacted with the ethylene glycol prepared from the catholyte of the same cell to form useful tertiary products, especially polyesters like polyethylene **terephthalate**. The mole ratios of ethylene glycol and polybasic acid can be controlled through selective use of a regeneratable redox reactant.

IC ICM C25C003-00
NCL 204072000
CC 72-9 (Electrochemistry)
Section cross-reference(s): 23, **35**, 45
ST ethylene glycol prodn paired electrochem synthesis
IT Synthesis
(electrochem., paired, and production of ethylene glycol)
IT 7440-22-4, **Silver**, uses and miscellaneous
RL: USES (Uses)
(divalent and monovalent, in paired-electrosynthesis production of ethylene glycol)
IT 7440-18-8, Ruthenium, uses and miscellaneous
RL: USES (Uses)
(hexavalent and tetravalent, in paired-electrosynthesis production of ethylene glycol)
IT 7440-47-3, Chromium, uses and miscellaneous
RL: USES (Uses)
(hexavalent and trivalent, in paired-electrosynthesis production of ethylene glycol)
IT 60-00-4, EDTA, uses and miscellaneous
RL: USES (Uses)
(in paired-electrosynthesis manufacture of ethylene glycol)
IT 75-59-2, Tetramethylammonium hydroxide 75-75-2, Methane sulfonic acid 139-13-9, NTA 141-53-7, Sodium formate 537-01-9, Cerium carbonate 2386-57-4, Sodium methanesulfonate 35733-58-5, Tetrabutylammonium formate 65411-49-6, Tetrabutylammonium methanesulfonate 107355-42-0
RL: PRP (Properties)
(in paired-electrosynthesis manufacture of ethylene glycol)
IT 14265-44-2, Phosphate, uses and miscellaneous 14808-79-8, Sulfate, uses and miscellaneous 14874-70-5, Tetrafluoroborate 14996-02-2, uses and miscellaneous 16919-18-9, Hexafluorophosphate 16984-48-8, Fluoride, uses and miscellaneous
RL: USES (Uses)
(in paired-electrosynthesis production of ethylene glycol)
IT 75-75-2, Methanesulfonic acid
RL: PRP (Properties)
(in paired-electrosynthesis production of ethylene glycol)
IT 66796-30-3, Nafion 117 67053-88-7, Nafion 324 77323-49-0, Nafion 417 116134-47-5, Raipore R 4035
RL: PRP (Properties)
(ion-exchange **membrane**, in paired-electrosynthesis production of ethylene glycol)
IT 84-65-1P, Anthraquinone 100-21-0P, 1,4-Benzenedicarboxylic acid, preparation 106-51-4P, 2,5-Cyclohexadiene-1,4-dione, preparation 121-91-5P, Isophthalic acid, preparation 130-15-4P, 1,4-Naphthalenedione 554-95-0P, Trimesic acid 605-70-9P, Naphthalene-1,4-dicarboxylic acid 25038-59-9P, preparation 26948-62-9P, Polyethylene **isophthalate**
RL: PREP (Preparation)
(manufacture of, in paired-electrosynthesis production of ethylene glycol)
IT 107-21-1P, Ethylene glycol, preparation

RL: PREP (Preparation)
(manufacture of, paired electrosynthesis for)
IT 71-43-2, Benzene, reactions 91-20-3, Naphthalene, reactions 99-94-5
106-42-3, reactions 120-12-7, Anthracene, reactions 589-18-4
589-29-7, 1,4-Benzenedimethanol 52010-97-6, p-Hydroxymethyl benzaldehyde
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of, in paired-electrosynthesis production of ethylene glycol)
IT 108-38-3, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in paired-electrosynthesis production of ethylene glycol)
IT 50-00-0P, Formaldehyde, reactions
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(reduction of, electrochem., for ethylene glycol production, paired electrosynthesis in)
IT 7439-92-1, Lead, uses and miscellaneous
RL: USES (Uses)
(tetravalent and divalent, in paired-electrosynthesis production of ethylene glycol)
IT 7440-62-2, Vanadium, uses and miscellaneous
RL: USES (Uses)
(tetravalent and pentavalent, in paired-electrosynthesis production of ethylene glycol)
IT 7440-45-1, Cerium, uses and miscellaneous
RL: USES (Uses)
(tetravalent and trivalent, in paired-electrosynthesis production of ethylene glycol)
IT 7439-89-6, Iron, uses and miscellaneous 7439-96-5, Manganese, uses and miscellaneous 7440-48-4, Cobalt, uses and miscellaneous
RL: USES (Uses)
(trivalent and divalent, in paired-electrosynthesis production of ethylene glycol)
IT 7440-28-0, Thallium, uses and miscellaneous
RL: USES (Uses)
(trivalent and monovalent, in paired-electrosynthesis production of ethylene glycol)

L37 ANSWER 37 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1991:109423 HCAPLUS
DN 114:109423
TI Direct observation of ion behavior in a **membrane** containing valinomycin
AU Fujiwara, Masato
CS Asaka Res. Lab., Fuji Photo Film Co., Ltd., Asaka, 351, Japan
SO Journal of Electroanalytical Chemistry and Interfacial Electrochemistry (1990), 296(1), 259-62
CODEN: JEIEBC; ISSN: 0022-0728
DT Journal
LA English
AB Ion transport in the **polymer membrane** of a liquid **membrane** type should be different from that of the liquid **membrane**. The ion carrier (large molar mass) in the liquid **membrane** can migrate along with the in, but the ion carrier which acts as a hopping site for the ion cannot move in the **polymer membrane**. X-ray microanal. showed that the **Ag**+ ion of an AgCl/**Ag** layer diffuses into the **membrane** which contains valinomycin, whereas K+ ions are not transported across the **membrane** within a short period.
CC 66-4 (Surface Chemistry and Colloids)
Section cross-reference(s): 9, 72, 79

ST **membrane** ion transport valinomycin selective electrode; potassium diffusion valinomycin **polymer membrane**; **silver** diffusion valinomycin **polymer membrane**

IT Diffusion
(of **silver** ion, into **membrane** containing valinomycin)

IT Electrodes
(cation-selective, valinomycin-containing **membrane** for)

IT 7440-09-7, Potassium, uses and miscellaneous
RL: USES (Uses)
(binding of, by valinomycin in ion-selective electrode **polymer membrane**)

IT 7783-90-6, **Silver** chloride, uses and miscellaneous
RL: USES (Uses)
(cation-selective electrodes formed by valinomycin-**membrane** coating of)

IT 7440-22-4, **Silver**, properties
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(diffusion of, into valinomycin-containing **membrane** in ion-selective electrode)

IT 117-81-7, Dioctyl **phthalate**
RL: PRP (Properties)
(ion carrier **solvent**, for cation-selective electrode **polymer membrane**)

IT 9003-22-9, Vinyl acetate-vinyl chloride **polymer**
RL: PRP (Properties)
(ion-selective electrode **membrane**, containing valinomycin)

L37 ANSWER 38 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1990:135597 HCAPLUS
DN 112:135597
TI Minaturized reference electrode for use in ion-selective electrode half cell, and method of making it
IN Schultz, Steven G.
PA Abbott Laboratories, USA
SO U.S., 9 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4891125	A	19900102	US 1989-336944	19890412
PRAI	US 1989-336944		19890412		

AB A miniaturized reference electrode includes a dielec. thermoplastic cup having a cavity to hold a reference liquid solution and having a sample contacting orifice at one end. A **membrane** comprising cellulose acetate and a **solvent** capable of exerting a **solvent** action on the sidewalls of the cup orifice is drop-deposited in the orifice and cured in situ. The resulting **membrane** extends across the orifice and is interdigitatedly anchored to the orifice sidewalls. The reference electrode further includes an **Ag**/AgCl screw-in electrode machined from **Ag** rod extending into and hermetically sealing the cup cavity. A reference liquid fill solution having a Cl- and K+ concentration similar to that found in the samples to be tested and the storage soak solution is provided to minimize drift of reference potential. The miniature reference electrode is intended for use with a miniaturized ion-selective electrode half cell in a test cartridge on a centrifugal clin. analyzer to determine electrolyte

concns. in fluid samples. Thus, a **membrane**-forming composition contained cellulose acetate 0.5, acetone 87.3, ~~CaCl2.2H2O~~ 3.3, MeOH 7.3, and diMe **phthalate** 1.6%. Reference electrode assemblies containing the composition were assembled, and the **membranes** were evaluated for conductances and adhesion lifetimes.

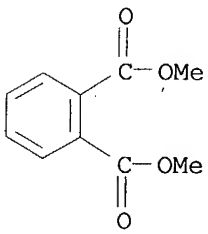
IC ICM G01N027-30
NCL 204435000
CC 9-7 (Biochemical Methods)
Section cross-reference(s): 79, 80
ST miniature ref electrode clin analysis; cellulose acetate **membrane** ref electrode; ion selective miniature ref electrode
IT Electric potential
(control of, in miniature reference electrode for clin. anal.)
IT Salts, uses and miscellaneous
RL: USES (Uses)
(in **membrane**-forming composition for miniature reference electrode for clin. anal.)
IT Physiological saline solutions
Acrylic **polymers**, uses and miscellaneous
RL: USES (Uses)
(in miniature reference electrode for clin. anal.)
IT **Alcohols**, uses and miscellaneous
RL: USES (Uses)
(C1-10, in **membrane**-forming composition for miniature reference electrode for clin. anal.)
IT Carboxylic acids, esters
RL: USES (Uses)
(C1-4-alkyl esters, in **membrane**-forming composition for miniature reference electrode for clin. anal.)
IT **Alcohols**, uses and miscellaneous
Hydrocarbons, uses and miscellaneous
RL: USES (Uses)
(C5-10-cyclic, in **membrane**-forming composition for miniature reference electrode for clin. anal.)
IT Carboxylic acids, esters
RL: USES (Uses)
(aryl, C1-4-alkyl esters, in **membrane**-forming composition for miniature reference electrode for clin. anal.)
IT Analysis
(clin., miniature reference electrode for)
IT Electrodes
(ion-selective, reference, miniature, for clin. anal.)
IT Electrodes
(**membrane**, cellulose acetate, in miniature ion-selective electrode half-cell for clin. anal.)
IT **Solvents**
(polar, organic, in **membrane**-forming composition for miniature reference electrode for clin. anal.)
IT Electrodes
(reference, miniature, for clin. anal.)
IT Plastics
RL: ANST (Analytical study)
(thermo-, dielec., cup of, in miniature reference electrode for clin. anal.)
IT 7440-23-5D, Sodium, salts 7440-50-8D, Copper, salts 7440-66-6D, Zinc, salts 7440-70-2D, Calcium, salts 10035-04-8, Calcium chloride dihydrate 10043-52-4, Calcium chloride, uses and miscellaneous **67-56-1**, **Methanol**, uses and miscellaneous 67-64-1, Acetone, uses and miscellaneous **109-99-9**, Tetrahydrofuran, uses and miscellaneous **131-11-3**, Dimethyl **phthalate**

7429-90-5D, Aluminum, salts 7439-93-2D, Lithium, salts 7439-95-4D, Magnesium, salts 7440-09-7D, Potassium, salts
RL: ANST (Analytical study)
(in **membrane**-forming composition for miniature reference electrode for clin. anal.)
IT 7447-40-7, Potassium chloride, uses and miscellaneous
RL: USES (Uses)
(in miniature reference electrode for clin. anal.)
IT 7783-90-6, **Silver** chloride, uses and miscellaneous
RL: USES (Uses)
(miniature reference electrode for clin. anal. containing **silver** and)
IT 7440-22-4, **Silver**, uses and miscellaneous
RL: USES (Uses)
(miniature reference electrode for clin. anal. containing **silver** chloride and)
IT 9004-35-7, Cellulose acetate
RL: ANST (Analytical study)
(miniature reference electrode **membrane** containing, for clin. anal.)
IT **67-56-1**, **Methanol**, uses and miscellaneous
109-99-9, Tetrahydrofuran, uses and miscellaneous **131-11-3**, Dimethyl **phthalate**
RL: USES (Uses)
(in **membrane**-forming composition for miniature reference electrode for clin. anal.)
RN 67-56-1 HCAPLUS
CN Methanol (8CI, 9CI) (CA INDEX NAME)

H_3C-OH

RN 109-99-9 HCAPLUS
CN Furan, tetrahydro- (7CI, 8CI, 9CI) (CA INDEX NAME)

RN 131-11-3 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dimethyl ester (9CI) (CA INDEX NAME)



L37 ANSWER 39 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1986:81344 HCAPLUS
DN 104:81344
TI Ion-selective electrode for titration of organic ions

IN Vytras, Karel; Remes, Miroslav; Riha, Vaclav
PA Czech.
SO Czech., 10 pp.
CODEN: CZXXA9
DT Patent
LA Czech
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CS 225222	B	19840213	CS 1981-5699	19810727
PRAI	CS 1981-5699		19810727		

AB Simple ion-selective electrodes for titration of organic ions were made from stainless steel, Al, graphite, Au-plated Cu, brass, or **Ag** wire (diameter 4-5 mm) with an insulated central part and one end coated with a 0.1-0.3 mm **membrane** from poly(vinyl chloride) or poly(vinyl butyral) containing a polar plasticizer (2-nitrophenylalkyl ether, tricresyl phosphate, dialkyl **phthalate**, sebacate, or oxalate). The **membrane** is made by repeated dipping into a **THF** or cyclohexanone solution of the **polymer** (30 mg/mL) and the plasticizer (0.1 mg/mL). The product of the 1st titration is adsorbed by the **membrane** and represents an electroactive compound The electrode and a SCE were used for potentiometric titration of cetylpyridinium bromide with NaBPh4.

IC G01N027-30
CC 80-2 (Organic Analytical Chemistry)
Section cross-reference(s): 72
ST **membrane** ion selective electrode; potentiometry titrn ion selective electrode
IT Vinyl acetal **polymers**
RL: ANST (Analytical study)
(butyrals, **membranes**, on ion-selective electrodes for potentiometric titration of organic ions)
IT Electrodes
(ion-selective, **membrane**, for potentiometric determination of organic ions)
IT Ethers, uses and miscellaneous
RL: ANST (Analytical study); USES (Uses)
(nitrophenyl, alkyl, as plasticizer for **polymer membrane** on ion-selective electrodes for potentiometric titration of organic ions)
IT 117-81-7 122-62-3 144-62-7D, dialkyl esters 1330-78-5 37682-29-4 77761-56-9
RL: ANST (Analytical study)
(as plasticizer, for **polymer membrane** on ion-selective electrodes for potentiometric titration of organic ions)
IT 88-99-3D, dialkyl esters 111-20-6D, dialkyl esters 140-72-7 2260-50-6 6424-75-5
RL: ANT (Analyte); ANST (Analytical study)
(determination of, **membrane** ion-selective electrode for potentiometric titrimetric)
IT 7440-57-5, uses and miscellaneous
RL: ANST (Analytical study); USES (Uses)
(electrodes from copper plated with, ion-selective, for potentiometric titration of organic ions)
IT 7440-50-8, uses and miscellaneous
RL: ANST (Analytical study); USES (Uses)
(electrodes, gold-plated ion-selective, for potentiometric titration of organic ions)
IT 7429-90-5, uses and miscellaneous 7440-22-4, uses and miscellaneous

7782-42-5, uses and miscellaneous 12597-68-1, uses and miscellaneous
12597-71-6, uses and miscellaneous
RL: ANST (Analytical study); USES (Uses)
(electrodes, ion-selective, for potentiometric titration of organic ions)
IT 9002-86-2
RL: ANST (Analytical study)
(**membrane**, on ion-selective electrodes for potentiometric titration of organic ions)

L37 ANSWER 40 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1984:95283 HCAPLUS
DN 100:95283
TI Flexible screen-printable conductive composition
IN Nazarenko, Nicholas
PA du Pont de Nemours, E. I., and Co. , USA
SO U.S., 5 pp. Cont.-in-part of U.S. Ser. No. 269,864, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4425263	A	19840110	US 1981-317278	19811102
	CA 1190735	A1	19850723	CA 1982-404183	19820601
	DK 8202486	A	19821204	DK 1982-2486	19820602
	JP 58001745	A2	19830107	JP 1982-93251	19820602
	JP 60025055	B4	19850615		
	EP 68168	A1	19830105	EP 1982-104858	19820603
	EP 68168	B1	19841227		
	R: BE, DE, FR, GB, IT, LU, NL				
PRAI	US 1981-269864		19810603		
	US 1981-317278		19811102		

AB A composition for **membrane** touch switches consists of an active phase of 30-80 weight% conductive powder dispersed in an organic medium (20-70 weight%)
consisting essentially of a linear aromatic polyester resin dissolved in volatile **solvent**. The conductive material may be **Ag**, Ni, Cu, C, Fe, Au, Pt, Pd, and their mixts. and alloys. Alternatively the conductive material may comprises a glass or organic **polymer** coated with **Ag**, Cu, or Ni. The linear aromatic **polymer** has an intrinsic viscosity of 0.5-1, and is the polycondensation product of a C2-4 alkylene glycol with either isophthalic or terephthalic acid, e.g. poly(ethylene **isophthalate** or **terephthalate**). The volume **solvent** has a boiling range of 150-220°, and is, in particular, carbitol acetate, or may be mixed with 1-methylethylene glycol Bu ether. The weight ratio of resin to **solvent** is 0.15-0.5. These compns. provide increased conductivity and abrasion resistance. Examples are presented for compns. from **Ag** with carbitol acetate, cellulose acetate and 1-methylethylene glycol Bu ether.
IC H01B001-06
NCL 252511000
CC 76-2 (Electric Phenomena)
ST **membrane** touch switch printable compn; conductive compn **membrane** touch switch; **silver** compn **membrane** touch switch; polyethylene **isophthalate membrane** touch switch; **terephthalate** polyethylene **membrane** touch switch; carbitol acetate **membrane** touch switch
IT Polyesters, uses and miscellaneous
RL: USES (Uses)

(in screened-printable conductivity compns. for **membrane** touch switches)

IT Electric switches and switching
(**membrane**-touch, screened-printable conductivity composition for)

IT Electric conductors
(screened-printable compns., for **membrane** touch switches)

IT 7439-89-6, uses and miscellaneous 7440-02-0, uses and miscellaneous
7440-05-3, uses and miscellaneous 7440-06-4, uses and miscellaneous
7440-22-4, uses and miscellaneous 7440-44-0, uses and miscellaneous
7440-50-8, uses and miscellaneous 7440-57-5, uses and miscellaneous
RL: TEM (Technical or engineered material use); USES (Uses)
(elec. conductors, in screened-printable compns. for **membrane** touch switches)

IT 112-15-2 9004-35-7 25038-59-9, uses and miscellaneous 26810-06-0
26948-62-9 29387-86-8
RL: USES (Uses)
(in screened-printable conductivity composition for **membrane** touch switches)

L37 ANSWER 41 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1983:199428 HCAPLUS
DN 98:199428
TI Laminated films with selective light transmission
PA Teijin Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 57193357	A2	19821127	JP 1981-63400	19810428
	JP 63004507	B4	19880129		
PRAI	JP 1981-63400		19810428		

AB In a **membrane** with selective light transmission, an assembly of (1) thin metal layers and (2) antireflecting layers with high n formed on a transparent **substrate**, ≥1 addnl. barrier layer (3) is inserted just after 1 so that each 1 is sandwiched between 2 and 3 to improve the durability, where the ratio of the Ar-etching rate in 3 to that in 2 is ≤0.6. The films are useful for, e.g., greenhouses. Thus, a 50-μ biaxially oriented poly(ethylene **terephthalate**) [25038-59-9] film (light transmittance 86%) was coated on 1 side with a solution of 3 parts (BuO)4Ti tetramer [70799-68-7] in 97 parts iso-PrOH, heated 3 min at 120° to give a 200-Å coating, sputter-plated to 150 Å with 92:8 **Ag**-Cu alloy [57852-89-8], and radio-frequency sputter-plated with Ti in a 95:5 Ar-O mixture to 31 Å to give a laminate. The laminate had 73% visible light transmittance, 93% IR (wavelength 10 μ) reflection, and the IR reflection decreased to 85% after 1200 h air blowing at 90°, compared with 71%, 92%, and 240 h, resp., when the Ti sputter-plating was omitted.

IC B32B015-08
CC 38-3 (**Plastics** Fabrication and Uses)
Section cross-reference(s): 42
ST selective light transmission **membrane**; polyethylene **terephthalate** film coating; sputter plating polyethylene **terephthalate** film; butoxytitanium tetramer antireflection coating; **silver** copper alloy sputter plating
IT Sputtering
(of titanium and copper-**silver** alloy, on poly(ethylene

terephthalate) films, for laminates with selective light transmission)
IT 7440-32-6, uses and miscellaneous 57852-89-8 70799-68-7
RL: USES (Uses)
(coatings, on poly(ethylene **terephthalate**) films, for selective light transmission)
IT 25038-59-9, uses and miscellaneous
RL: USES (Uses)
(film, laminates, with selective light transmission)

L37 ANSWER 42 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1983:134197 HCAPLUS
DN 98:134197
TI Electrode properties of valinomycin **membranes** plasticized by nitro compounds
AU Mikhel'son, K. N.; Grekovich, A. L.; Materova, E. A.
CS Leningr. Gos. Univ., Leningrad, USSR
SO Elektrokhimiya (1983), 19(2), 249-52
CODEN: ELKKAX; ISSN: 0424-8570
DT Journal
LA Russian
AB Typical nitro plasticizers used in the title study were o-nitrophenyl octyl ether [37682-29-4] and o-nitro-p-cymene [943-15-7]. Poly(vinyl chloride) [9002-86-2] Was treated in a weight ratio 1:3 with the plasticizer. **THF** was the **solvent** for the **polymer**. The electromotive force was measured of the cell: **Ag**|AgCl, KCl (saturated).tplbond.external solution|**membrane**|KCl(0.01m), AgCl|**Ag**, with a precision of ±0.1 mV. The solution temperature was 20 ±1°. **Membranes** plasticized with o-nitrophenyl octyl ether contained valinomycin [2001-95-8] in concns. of o-5.52 + 10-3m. The curves of the dependence of electromotive force on K activity in the solns., using on electrode with these **membranes**, are presented. The selectivity of the **membrane** with respect to K+ was studied by measuring the electromotive force of the cell in solns. with varying concns. of KCl and constant concentration of electrolyte containing 0.1m NaCl, 0.1m NH4Cl, and 0.01m CsCl. The electromotive force was also measured in solns. of the NaCl, NH4Cl, and CsCl. The best plasticizers are phthalic acid diesters, especially dioctyl **phthalate** [117-81-7]. The data agree with predictions on the effect of the **solvent** nature on the electrode properties of valinomycin **membrane**.
CC 72-2 (Electrochemistry)
Section cross-reference(s): 79
ST **solvent** effect electrode property **membrane**; electrode property valinomycin **membrane**; plasticized valinomycin **membrane** electrode; potassium ion selective electrode
IT Electric potential
(of cell with valinomycin **membranes** plasticized by nitro compds.)
IT **Solvent** effect
(on electrode properties of valinomycin **membranes**)
IT Electrodes
(ion-selective, valinomycin **membranes** plasticized by nitro compds. for)
IT 7440-09-7, analysis
RL: ANT (Analyte); ANST (Analytical study)

(determination of, valinomycin **membranes** for ion-selective electrodes for)
IT 7647-14-5, properties 7647-17-8, properties 12125-02-9, properties
RL: PRP (Properties)
(electrode properties of valinomycin **membranes** plasticized by nitro compds. in solns. containing)
IT 2001-95-8
RL: PRP (Properties)
(**membranes**, for potassium ion-selective electrodes)
IT 117-81-7
RL: MOA (Modifier or additive use); USES (Uses)
(plasticizer, for valinomycin **membrane** for potassium ion-selective electrode)
IT 943-15-7 37682-29-4
RL: MOA (Modifier or additive use); USES (Uses)
(plasticizer, for valinomycin **membranes** for potassium ion-selective electrodes)
IT 9002-86-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with plasticizer, for valinomycin **membranes** for potassium ion-selective electrodes)

L37 ANSWER 43 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1982:196198 HCAPLUS
DN 96:196198
TI Ion-selective electrode
IN Battaglia, Charles J.; Chang, Jack C.; Daniel, Daniel S.
PA Eastman Kodak Co., USA
SO Can., 77 pp. Division of Can. Appl. No. 276,918.
CODEN: CAXXA4
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 1116696	A2	19820119	CA 1980-352785	19800527
	CA 1093641	A1	19810113	CA 1977-276918	19770425
PRAI	US 1976-687966		19760519		
	CA 1977-276918		19770425		

AB Preparation of dry-operative ion-selective electrodes (e.g., for blood anal.) are described. The electrodes are comprised of a dried redox internal electrode in contact with a hydrophobic ion-selective **membrane**. The internal reference electrode has a hydrophilic **polymer** as binder in the layer containing the redox couple and the conducting layer. In 1 example, a laminated ion-selective electrode was prepared by coating a **Ag**-AgCl film on poly(ethylene **terephthalate**) with a poly(vinyl **alc.**)-KCl solution After drying, an ion-selective **membrane** comprised of valinomycin, poly(vinyl chloride), and bromophenyl Ph ether was manually laminated on top of the coating film. A linear semilogarithmic response to K+ was observed with a slope of 57 mV/decade in the pK range of 1-4. In a solution containing 5 mM K+ and 150 mM Na+, the Na+ response represented a 3% interference. Thus, small variations in Na+ over the clin. range, i.e., 0.12-0.16M, result in <1% variation in the interference. Other electrode compns. are described.
IC G01N027-50
CC 9-7 (Biochemical Methods)
Section cross-reference(s): 72
ST ion selective electrode prepn; potassium detn blood electrode
IT Gelatins, uses and miscellaneous

RL: USES (Uses)
(as binder, in ion-selective electrode)

IT Rubber, silicone, uses and miscellaneous
Rubber, urethane, uses and miscellaneous
RL: DEV (Device component use); USES (Uses)
(ion-selective **membrane** containing, for electrodes)

IT Blood analysis
(ions determination in, ion-selective electrodes for)

IT Vinyl acetal **polymers**
RL: DEV (Device component use); USES (Uses)
(butyrals, ion-selective **membrane** containing, for electrodes)

IT Electrodes
(ion-selective, preparation of)

IT 818-61-1 868-77-9 9002-89-5 9003-01-4 9003-05-8 9003-39-8 9012-36-6
RL: ANST (Analytical study)
(as binder, in ion-selective electrode)

IT 7440-02-0, uses and miscellaneous 7440-06-4, uses and miscellaneous 7440-44-0, uses and miscellaneous 7440-57-5, uses and miscellaneous
RL: USES (Uses)
(as conductor, in ion-selective electrode)

IT 2432-90-8 78-93-3, biological studies **109-99-9**, biological studies 117-81-7
RL: ANST (Analytical study)
(as ion carrier, in electrode)

IT 7440-22-4, analysis 16887-00-6, analysis 24959-67-9, analysis
RL: ANT (Analyte); ANST (Analytical study)
(determination of, ion-selective electrode for)

IT 13746-66-2 13943-58-3 65532-25-4
RL: ANST (Analytical study)
(for redox couple, in ion-selective electrode)

IT **84-74-2** 109-43-3 117-81-7 **131-11-3** 1655-68-1 1655-69-2 1754-47-8
RL: DEV (Device component use); USES (Uses)
(ion-selective **membrane** containing, for electrode)

IT 2001-95-8 9003-22-9
RL: DEV (Device component use); USES (Uses)
(ion-selective **membrane** containing, for electrodes)

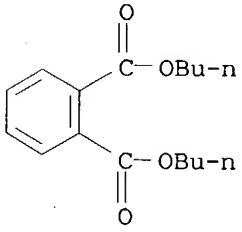
IT 7440-23-5, uses and miscellaneous
RL: USES (Uses)
(potassium determination by ion-selective electrode interference by)

IT **109-99-9**, biological studies
RL: BIOL (Biological study)
(as ion carrier, in electrode)

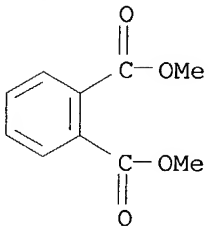
RN 109-99-9 HCAPLUS
CN Furan, tetrahydro- (7CI, 8CI, 9CI) (CA INDEX NAME)

IT **84-74-2 131-11-3**
RL: DEV (Device component use); USES (Uses)
(ion-selective **membrane** containing, for electrode)

RN 84-74-2 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



RN 131-11-3 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dimethyl ester (9CI) (CA INDEX NAME)



L37 ANSWER 44 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1980:612413 HCAPLUS
DN 93:212413
TI Ion-selective electrode
IN Battaglia, Charles J.; Chang, Jack C.; Daniel, Daniel S.
PA Eastman Kodak Co., USA
SO U.S., 22 pp. Cont.-in-part of U.S. Ser. No. 687,966, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4214968	A	19800729	US 1978-893656	19780405
PRAI	US 1976-687966		19760519		

AB These anal. electrodes present a dry, solid appearance and require only a drop i.e. <50 μL and preferably .apprx.10 μL of solution to give an accurate measurement. To make a **Ag**/AgX (X = halide) electrode a sample of vacuum-deposited **Ag** on a polyethylene **terephthalate support** was treated for 5 min in a solution containing: glacial HOAc 0.45 mL, NaOH 0.20, K3Fe(CN)6 0.80, and KBr 2.50 g/L (distilled H2O). After washing for 5 min, inspection revealed a partial conversion to AgBr with a contiguous layer of **Ag** adjacent the **support**. A narrow strip along 1 edge was dipped briefly into Na2S2O5 solution to uncover the **Ag** layer for making an elec. contact. In detns. of Br- in aqueous samples a linear response with an. approx. theor. slope (Nernst) was observed
IC G01N027-30; G01N027-46
NCL 204195000M
CC 72-7 (Electrochemistry)
Section cross-reference(s): 13, 79
ST electrode ion selective dry look; bromide detn ion selective electrode
IT Gelatins, uses and miscellaneous

Rubber, silicone, uses and miscellaneous
Rubber, urethane, uses and miscellaneous
RL: PRP (Properties)
(electrodes containing, ion-selective with dry look)

IT Blood analysis
(ion-selective electrodes for)

IT Vinyl acetal **polymers**
RL: PRP (Properties)
(butyrals, electrodes containing, ion-selective with dry look)

IT 16887-00-6, analysis 24203-36-9, analysis 24959-67-9, analysis
RL: ANT (Analyte); ANST (Analytical study)
(determination of, dry look ion-selective electrodes for)

IT 7440-23-5, analysis
RL: ANT (Analyte); ANST (Analytical study)
(determination of, ion-selective dry look electrode for)

IT 7440-44-0, uses and miscellaneous
RL: USES (Uses)
(electrodes containing, ion-selective with dry look)

IT 78-42-2 143-66-8 2001-95-8 9002-86-2 9002-89-5 9002-93-1
9003-05-8 9003-22-9 65532-25-4
RL: PRP (Properties)
(electrodes containing, ion-selective with dry look)

IT 7783-90-6, uses and miscellaneous 7785-23-1
RL: USES (Uses)
(electrodes of **silver**, with dry look)

IT 7440-22-4, uses and miscellaneous
RL: USES (Uses)
(electrodes, with dry look)

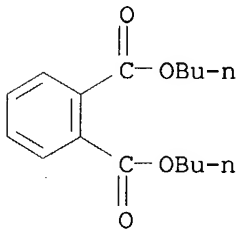
IT 78-93-3, uses and miscellaneous **84-74-2** 109-43-3
109-99-9, uses and miscellaneous 117-81-7 **131-11-3**
RL: USES (Uses)
(**membrane solvent**, for ion-selective dry look electrodes)

IT 1655-68-1 1655-69-2 1754-47-8 2432-90-8 36563-47-0 65440-56-4
RL: PRP (Properties)
(**membrane solvent**, for ion-selective dry look electrodes)

IT 7447-40-7, uses and miscellaneous
RL: USES (Uses)
(reference electrolyte, in ion-selective dry look electrodes)

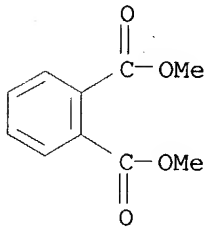
IT **84-74-2 109-99-9**, uses and miscellaneous
131-11-3
RL: USES (Uses)
(**membrane solvent**, for ion-selective dry look electrodes)

RN 84-74-2 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



RN 109-99-9 HCAPLUS
CN Furan, tetrahydro- (7CI, 8CI, 9CI) (CA INDEX NAME)

RN 131-11-3 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dimethyl ester (9CI) (CA INDEX NAME)



L37 ANSWER 45 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1980:87629 HCAPLUS
DN 92:87629
TI Electrodes for organic ion concentration determination
IN Muramatsu, Kyozo
PA Mitsubishi Chemical Industries Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 54136893	A2	19791024	JP 1978-44029	19780414
PRAI	JP 1978-44029		19780414		

AB An electrode for determination of organic ion concentration is equipped with an ion-selective **membrane** made of a **polymer** composition containing a compound of a quaternary ammonium ion R4N+ (R = hydrocarbon moiety, halogenated hydrocarbon moiety) and B derivative anion R14B- (R1 = hydrocarbon moiety, halogenated hydrocarbon moiety) or B cage compound anion. The electrode exhibit excellent sensitivity, selectivity, and reproducibility (of anal. data). Thus, 50 mL 10-2M (PhCH2)2NMe2Cl and 50 mL 10-2M NaBPh4 were mixed, the resultant precipitate was extracted into dichloroethane, the solution was evaporated, and the residue was dissolved in **THF**. The solution was mixed with a solution containing poly(vinyl chloride) and dioctyl **phthalate**, and the mixture was slowly evaporated in a flat container to give an ion-selective **membrane**. The **membrane** was attached to 1 end of a plastic tube, then 10-2M (PhCH2)NMe2Cl was added to the tube, and a **Ag**/AgCl electrode was contacted with the solution with a salt bridge (containing KCl) to give an electrode for organic ion concentration measurements. The electrode showed good sensitivity for (PhCh2NMe2)+ in the concentration range 10-6-10-2M. Very few interferences from other ions were

observed
IC G01N027-40; G01N027-46
CC 80-2 (Organic Analytical Chemistry)
ST org ion selective **membrane** electrode; benzylmethylammonium selective electrode; quaternary ammonium ion selective electrode; phenylborate **membrane** ion selective electrode; borate phenyl **membrane** selective electrode; boron compd **membrane** selective electrode
IT Quaternary ammonium compounds, analysis
RL: ANT (Analyte); ANST (Analytical study)
(determination of, ion-selective electrode for)
IT Electrodes
(dibenzyldimethylammonium-selective, dibenzyldimethylammonium tetraphenylborate **membranes** in)
IT Electrodes
(organic ion-selective, quaternary ammonium compds. with boron-derivative anions in **membranes** for)
IT 14800-26-1
RL: ANT (Analyte); ANST (Analytical study)
(determination of, ion-selective electrodes for)
IT 7440-42-8D, compds. 41742-44-3
RL: DEV (Device component use); ANST (Analytical study); USES (Uses)
(**membranes** containing, in organic ion-selective electrodes)

L37 ANSWER 46 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1971:494395 HCAPLUS
DN 75:94395
TI **Polymer membranes** for the determination of lead in solutions
IN Stucky, Gary L.
PA Miles Laboratories Inc.
SO Ger. Offen., 17 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2057114		19710603		
	FR 2069636			FR	
	GB 1312469			GB	
PRAI	US		19691120		

AB The lead concentration of solns. was determined by measuring the potential difference between a standard calomel electrode immersed in a reference Pb(NO3)2 solution and an **Ag**-AgCl electrode immersed in the sample solution by using semipermeable **polymeric membranes prepared** from **solvent** solns. containing poly(vinyl chloride) (I), a plasticizer, e.g. dipentyl **phthalate** (II), and dithizone as chelating agent. Thus, a **membrane** was **prepared** by casting a mixture of 0.25 g I, 0.75 ml II, and 2.5 mg dithizone made up to 5 ml with cyclohexanone on microslides and drying for 12 hr at room temperature
IC G01N
CC 79 (Inorganic Analytical Chemistry)
ST lead potentiometric detn; PVC **membrane** lead detn; dithizone **membrane** lead detn; **phthalate membrane** lead detn
IT Chelating agents

(in semipermeable **membranes** for lead determination)
IT Plasticizers
(in vinyl chloride **polymer** semipermeable **membranes**, for lead determination)
IT **Membranes**
(semipermeable, for potentiometric determination of lead)
IT 60-10-6
RL: ANST (Analytical study)
(chelating agents, in semipermeable **membranes** for lead determination)
IT 7439-92-1, analysis
RL: ANT (Analyte); ANST (Analytical study)
(determination of, **polymer membranes** for potentiometric titrimetric)
IT 131-18-0
RL: MOA (Modifier or additive use); USES (Uses)
(plasticizers, in vinyl chloride **polymers** for semipermeable **membranes**, for lead determination)
IT 9002-86-2, uses and miscellaneous
RL: USES (Uses)
(semipermeable **membranes**, in lead determination)

L37 ANSWER 47 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1965:13182 HCAPLUS
DN 62:13182
OREF 62:2402g-h,2403a
TI Photographic stripping film
IN Sinclair, James R.
PA Minnesota Mining and Manufacturing Co.
SO 4 pp.
DT Patent
LA Unavailable
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3156565		19641110	US	19620913

AB A stripping film useful in the photomech. arts, that may be manufactured at reduced cost and that can be stripped cleanly without need of **solvent** treatment, has as consecutive layers or films, a polystyrene base, a releasable **membrane**, a **substratum**, and a photosensitive layer. The base is a biaxially oriented polystyrene film with an antihalation backing, or a selective light-absorption dye throughout. The releasable **membrane** is made from a mixture of an acrylate ester **polymer** and a cellulose ester or a cellulose ether; typical of the former is the **copolymer** of Et methacrylate and Me acrylate (Acryloid B-72); typical of the latter are cellulose acetate, cellulose propionate, cellulose butyrate, and cellulose acetate butyrate (I). The **substratum** is a very thin coating of nitrocellulose and gelatin. The photosensitive layer is a **Ag** halide gelatin emulsion. E.g., a 0.005-in. thick CdO-pigmented polystyrene film is coated with a releasable **membrane** solution containing I (20 sec., EAB 381-20) 64, Acryloid B-72 16, di-Bu **phthalate** 20, EtOAc 10, BuOAc 35, iso-BuOH 75, PhMe 30, and **EtOH** 150 parts by weight After drying the **membrane**, it is coated with a subbing composition containing gelatin 3, H2O 2, AcOH 6, nitrocellulose (55.5°) 8, Me2CO 18, and MeOH 63 parts by weight Once the subbing coating is dry, it may be coated with **Ag** halide emulsion in the conventional manner.
NCL 096083000
CC 11 (Radiation Chemistry and Photochemistry)

IT Photographic films
(strippable, with polystyrene **support** and releasable **membrane** of acrylate **polymers** and cellulose ester or ether)
IT 9003-53-6, Styrene **polymers**
(photographic stripping film on **support** of, with **membrane** of acrylate **polymers** and cellulose ester or ether)
IT 79-41-4, Methacrylic acid 96-33-3, Acrylic acid, methyl ester
9004-36-8, Cellulose, acetate butyrate 9004-57-3, Cellulose, ethyl ether
(releasable **membrane** containing, for photographic stripping film)

=>